

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



	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			Registration (Main Hall)			Registration (Main Hall)			Registration (Main Hall)			Registration				08:00-08:30			
08:30-09:00						(Main Hail)			(Main Hail)			(Main Hall)				08:30-09:00			
09:00-09:30	Bus departure to Getxo	(Maii Haii)			Oral	Oral	Oral	Oral	Oral	Oral	Oral	Oral		Oral	Oral	Oral		09:00-09:30	
09:30-10:00	Regatta					presentation WDD	presentation TDD	presentation WHM	presentation THM	presentation WDD	presentation TDD	presentation TRC	presentation EIA		presentation GPC	presentation WRC	presentation ESP		09:30-10:00
10:00-10:30			Opening ( (Mitxelena A												10:00-10:30				
10:30-11:00		(mixolona zuononam)						Refres	shments, networking & posters exhibition (Terrace and Chillida			room)			Social programme Guided tour through the river by BILBOATS	10:30-11:00 11:00-11:30			
11:00-11:30 11:30-12:00			Keynote lecture	es + JRL-ORE		Oral presentation	Oral presentation	Oral presentation	Oral presentation	Oral presentation	Oral presentation	Oral		Oral presentation	Oral presentation	Oral presentation	Oral presentation	liver by BILBOATS	11:30-12:00
12:00-12:30	Regatta La mar en calma Sailing		(Mitxelena )	Auditorium)		WDD	TDD	WHM	THM	WDD	TDD	TRC		WDD	GPC	WRC	ESP		12:00-12:30
12:30-13:00	School in Getxo (10:00-15:00h)																		12:30-13:00
13:00-13:30										nch									13:00-13:30
13:30-14:00							(Terrace and C				Chillida room)								13:30-14:00
14:00-14:30																			14:00-14:30
14:30-15:00	Bus returning to Bilbao	Oral presentation	Oral presentation	Oral presentation	Oral presentation	Oral presentation	Oral presentation	Oral presentation	Oral presentation	Oral presentation		Oral presentation	Oral presentation	Oral presentation		Oral presentation	Oral presentation		14:30-15:00
15:00-15:30		WHM	ONM	SMM	GPC	WDD	TDD	WHM	THM	WDD		TRC	EIA	WDD		WRC	ESP		15:00-15:30
15:30-16:00	Refreshments, networking & posters exhibition (Terrace and Chillida room)								Closing Ceremony			15:30-16:00							
16:00-16:30																			16:00-16:30
16:30-17:00		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							16:30-17:00
17:00-17:30																			17:00-17:30
17:30-18:00	2 Buses departing to	Oral	Oral	Oral	Oral	Oral		Oral	Oral						Technic	al visits:			17:30-18:00
18:00-18:30	Olatua Building Getxo Cruise Terminal every 30	presentation WHM	presentation SMF	presentation SMM	presentation GPC	presentation WDD		presentation WHM	presentation THM						Option 1:	MUTRIKU			18:00-18:30
18:30-19:00	minutes (around 6 buses)														Option 2	2: BIMEP			18:30-19:00
19:00-19:30								nmittee Meeting											19:00-19:30
19:30-20:00	Welcome Reception						Emuy	ar room)											19:30-20:00
20:00-20:30	(Olatua Building Getxo Cruise Terminal)								Opening of the galleries of the Museum							20:00-20:30			
20:30-21:00	Registration available		Social pro Pintxos			(Track Directors Dinner)		Оре	Opening of the galleries of the Museum (exclusive for Delegates)							20:30-21:00			
21:00-21:30														-	ti D 11	Anadian and Di			21:00-21:30
21:30-22:00	All Buses returning to													(Ex	ecutive Board N	Meeting and Din	mer)		21:30-22:00 22:00-22:30
22:00-22:30	Bilbao			15/1	12023	RII	RA			Gala Dinner (Atrium of the Guggenheim Museum)							22:30-22:30		
23:00-23:30		European Wave and Tidal Energy Conference Series		3rd -7th SEF	BILBA GO 3rd -7th SEPTEMBER 2023			,						23:00-23:00					
23.00-23.30				Ellergy Coll	.c.circe Jeries												_		25.50-25.50
Colour code:	Olatua Building	Mitxelena	(440 pax)	Mai	n Hall	Barandiara	án (16 pax)	Elhuyar	(24 pax)	Chillida	(220 m2)	Oteiza (	(60 pax)	Terrace (80	10+400 m2)	Baroja (	160 pax)	Laboa (110 m2)	Arriaga (60 pax)
		Tidal hydrodyna				Wave device de		-					decommissionin	g				olitical aspects of ocean en	ergy
Tracks:				Grid integration, power take-off and control  Wave resource characterization			TDD: Tidal device development and testing TRC: Tidal resource characterization			SMF: Station-keeping, moorings and foundations SMM: Structural mechanics - materials, fatigue, loadings									



				Monday September 4		
0:00				Registration (Main Hall)		
		Jesús M. Blanco		Local Committee Chairman	10:00-10:10	
Opening		Cameron Johnstone		EWTEC Executive Board Chair	10:10-10:20	
0:50 Ceremony		Jose L. Villate		Local Committee Chairman	10:20-10:30	
		Gorka Moreno		Vicerector campus UPV/EHU	10:30-10:40	
		Arantxa Tapia		Basque Government	10:40-10:50	
Keynote lectures	Mitvelena Auditorium	Iñigo Losada		IH-Cantabria	11:00-11:40	
Auditorium		Andrew Scott		Orbital Marine Power	11:40-12:20	
JRL-ORE	Mitxelena Auditorium	Eider Robles		JRL-ORE	12:20-12:30	
14:00				Lunch & posters exhibition (Terrace and Chillida room)		
	Room /Track	Chairman	Paper ID	1	Title	Presenter
			142		ed oscillating water column wave energy conversion	Vaibhav Raghavan Hong-Bhin Kim
	Baroja/		192 265	Fast time-domain model for an array of interactive poir	/EC motion on a combined wind-wave energy platform	Charitini Stavropoulou
	Wave hydrodynamic modelling	Deborah Greaves	163	A CFD-FEM analysis for Anaconda WEC with mooring lines		Yang Huang
			153	CMIP6 wave climate simulation in the European North	East Atlantic Basin using WaveWatch III	Ponni Maya
			262	Informing Early Design Decisions Through Functional Renewables	Analysis of Maintenance Drivers: Applications in Marine	Nathan Algarra
	Laboa/		259	Lubrication of offshore mechanical components: towar SEASNAKE: Impact - Marine operations modelling for	evidence-based results detailing the impact of using a	Juan Guillermo Zapita Tama Ben Kennedy
	Operations, maintenance and decommissioning	Gregorio Iglesias	535	new fully dynamic cable design for ocean energy devi	es.	Dell Rennedy
Oral						
presentatio	ns		181	Structural testing and numerical modelling of a glass fi	bre-reinforced composite demonstrator for turbine blades	Yadong Jiang
	Arriaga/		469	Antifouling and anticorrosive prevention with ceramic of		David Salvador Sanz Sanch
	Structural mechanics - materials, fatigue,	Claudio Lugni	389 147	Understanding the force motion trade off of rigid and I Reducing the uncertainty of ULS load estimates in of		Abel Arredondo-Galeana Joao Cruz
	loadings		222		otor Components Fabricated with Additive Manufacturing	Rob Cavagnaro
			267	Material characterization of elastomeric bearing eleme Experimental validation of rollout-based model predicti	Rimmie Duraisamy	
			174 288	taut-moored point absorber prototype  Control co-design and uncertainty analysis of the LUP	Zechuan Lin Carlos Michelen Strofer	
	Oteiza/					
		John Ringwood	396	Tidal barrage operation optimization using moment-ba	sed control	Agustina Skiarski
	Grid integration, power take-off and control	John Ringwood	434	Laboratory Tests Assessment of a Mechanical Sensor	less MPPT Control Strategy for Tidal Turbines	Mohammad Rafiei
	Grid integration, power	John Ringwood			less MPPT Control Strategy for Tidal Turbines under energy-maximising control	<u> </u>
00	Grid integration, power		434 590 468	Laboratory Tests Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform	less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Cubature Kalman Filter: Improved Design and	Mohammad Rafiei  Maria Luisa Celesti
5:00	Grid integration, power	Refreshment	434 590 468 s, networki	Laboratory Tests Assessment of a Mechanical Sensor Design considerations for a hybrid wird-wave platform Wave Excitation Force Estimation for a Mult-DoF WEC Results ng & posters exhibition ( <i>Terrace and</i>	less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Cubature Kalman Filter: Improved Design and	Mohammad Rafiei  Maria Luisa Celesti  Paolino Tona
	Grid integration, power take-off and control  Mitxelena/Side event 1	Refreshment "Supergen ORE Hu	434 590 468 s, networki	Laboratory Tests Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Exclation Force Estimation for a Multi-DoF-WEC Results on the Multi-DoF-WEC Resu	less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Guisature Kalman Filter: Improved Design and Chillida room)	Mohammad Rafiei Maria Luisa Celesti Paolino Tona  Province Tona  Province Tona  Province Tona  Province Tona  Province Tona
16:00 17:30 Side event	Grid integration, power take-off and control  Mitxelena/Side event 1	Refreshment "Supergen ORE Hu	434 590 468 s, networki	Laboratory Tests Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Exclation Force Estimation for a Multi-DoF-WEC Results on the Multi-DoF-WEC Resu	Less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Cubature Kahran Filter. Improved Design and Chillida room)  itties" (by SUPERGEN-ORE HUB - Univ  DEEC-Tec)" (by Wave Energy Scotland	Mohammad Rafiei Maria Luisa Celesti Paolino Tona  Province Tona  Province Tona  Province Tona  Province Tona  Province Tona
	Grid integration, power take-off and control  Mitxelena/Side event 1  Baroja/Side event 2	Refreshment "Supergen ORE Hu	434 590 468 s, networki	Laboratory Tests Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Exclation Force Estimation for a Multi-Dor-WEC Results ing & posters exhibition (Terrace and d Tidal Energy research and opportunity of the Company of	Less MPPT Control Strategy for Tidal Turbines under energy-maximising control va a Cubature Kalman Filter Improved Design and Chillida room)  itties" (by SUPERGEN-ORE HUB - Univ  DEEC-Tec)" (by Wave Energy Scotland all and Wind Turbine Blades University of Edinburgh)	Mohammad Rafiei Maria Luisa Celesti Paolino Tona  ersity of Plymouth)  if / NREL)
	Grid integration, power take-off and control  Mitxelena/Side event 1  Baroja/Side event 2  Arriaga/Side event 3	Refreshment "Supergen ORE Hu "Distribu	434 590 468 s, networki b Wave an	Laboratory Tests Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Excitation Force Estimation for a Multi-Dor WEC Results Ing & posters exhibition (Terrace and India Energy research and opportunity Ided Energy Conversion Technology ( "Morphing Blades: New-Concept Tide for Unsteady Load Mitigation" (by  An Experimental Study for Wave Energy Converter of Technique Demonstrating real-time hydrodynamic motion response	Less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Cubature Kaman Filter Improved Design and Chillida room)  itties" (by SUPERGEN-ORE HUB - Univ  DEEC-Tec)" (by Wave Energy Scotland al and Wind Turbine Blades University of Edinburgh)	Mohammad Rafiei Maria Luisa Celesti Paolino Tona  ersity of Plymouth)  4 / NREL)  Presenter Yoon-Jin Ha
	Grid integration, power take-off and control  Mitxelena/Side event 1  Baroja/Side event 2  Arriaga/Side event 3  Room/Track	Refreshment "Supergen ORE Hu "Distribu	434 590 468 s, networki	Laboratory Tests Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Exclasion Force Estimation for a Multi-DoF WEC Results Ing & posters exhibition (Terrace and d Tidal Energy research and opportun tided Energy Conversion Technology i  "Morphing Blades: New-Concept Tidi for Unsteady Load Mitigation" (by  An Experimental Study for Wave Energy Converter of	Less MPPT Control Strategy for Tidal Turbines under energy-maximising control ve a Cubature Kalman Filter Improved Design and Chillida room)  Itties" (by SUPERGEN-ORE HUB - Univ  DEEC-Tec)" (by Wave Energy Scotland al and Wind Turbine Biades University of Edinburgh)  Title Wavestar Type using Real-Time Hybrid Model Testing e in force control for regular waves in a robotized dry test	Mohammad Rafiei Maria Luisa Celesti Paolino Tona  ersity of Plymouth)  if / NREL)
	Grid integration, power take-off and control  Mitxelena/Side event 1  Baroja/Side event 2  Arriaga/Side event 3	Refreshment "Supergen ORE Hu "Distribu	434 590 468 s, networki b Wave an ted Embec 152 643 534 261	Laboratory Testa Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Excitation Force Estimation for a Multi-DoF WEC Results Ing & posters exhibition (Terrace and  d Tidal Energy research and opportun  defended Energy Conversion Technology ( "Morphing Blades: New-Concept Tida for Unsteady Load Mittigation" (by  An Experimental Study for Wave Energy Converter of Technique to with a point-elaborier WEC. Sensor Study of the Confederate Interpolator for Review of TEAMER Awards for WEC-Sim Support	Less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Cubature Kahran Filter. Improved Design and  Chillida room)  itties" (by SUPERGEN-ORE HUB - Univ  DEEC-Tec)" (by Wave Energy Scotland al and Wind Turbine Blades University of Edinburgh)  Title Wavestar Type using Real-Time Hybrid Model Testing e in force control for regular waves in a robotized dry test Control Co-Design of Wave Energy Converters	Mohammad Rafiei Maria Luisa Celesti Paolino Tona  ersity of Plymouth)  I / NREL)  Presenter Yoon-Jin Ha Dana Salar Yeral Peña-Sanchez Adam Keester
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	Grid integration, power take-off and control  Mitxelena/Side event 1  Baroja/Side event 2  Arriaga/Side event 3  Room/Track  Baroja/ Wave hydrodynanic modelling	Refreshment "Supergen ORE Hu "Distribu Chairman Siming Zheng	434 590 468 s, networki b Wave an ated Embed 152 643 534 261 182 272	Laboratory Tests Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Exclation Force Estimation for a Multi-Doir WEC Results Ing & posters exhibition (Terrace and  d Tidal Energy research and opportun  ded Energy Conversion Technology ( "Morphing Blades: New-Concept Tid for Unsteady Load Mitigation" (by  An Experimental Study for Wave Energy Converter)  An Experimental Study for Wave Energy Converter of Descential Control of the Control of the Control Results of the Control Resul	Less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Cubature Kalman Filter Improved Design and Chillida room)  Ittles" (by SUPERGEN-ORE HUB - Univ  DEEC-Tec)" (by Wave Energy Scotland  I and Wind Turbine Blades University of Edinburgh)  Ittle Wavestar Type using Real-Time Hybrid Model Testing e in force control for regular waves in a robotized dry test Control Co-Design of Wave Energy Converters a Energy System through Genetic Algorithm  Intunity to be expibiled? A case for a 2:1 wave energy matic conditions. a generalised framework for moored weeder in Extreme Waves	Mohammad Rafiei Maria Luisa Celesti Paolino Tona  ersity of Plymouth)  1 / NREL)  Presenter Yoon-Jin Ha Dana Salar Yerai Peña-Sanchez Adam Keester Emeel Kerikous Giuseppe Giorgi
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50 Side event	Grid integration, power take-off and control  Mitxelena/Side event 1  Baroja/Side event 2  Arriaga/Side event 3  Room/Track  Baroja/ Wave hydrodynamic modelling  Laboa/ Station-keeping, moorings and foundations	Refreshment "Supergen ORE Hu "Distribu Chairman Siming Zheng	434   590   468	Laboratory Testa Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Excitation Force Estimation for a Multi-DoF WEC Results ng & posters exhibition (Terrace and d Tidal Energy research and opportun  Ided Energy Conversion Technology ( "Morphing Blades: New-Concept Tide for Unsteady Load Mittigation" (by)  An Expaniental Study for Wave Energy Converter of Energy with a portisation of Fulidic Dode for a Wave Performance Enhancement of Fulidic Dode for a Wave Performance E	Less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Cubature Kalman Filter. Improved Design and  Chillida room)  Ittles" (by SUPERGEN-ORE HUB - Univ  DEEC-Tec)" (by Wave Energy Scotland  It and Wind Turbine Blades University of Edinburgh)  Ittle Wavestar Type using Real-Time Hybrid Model Testing e in force control for regular waves in a robotized dry test Control Co-Design of Wave Energy Converters  se Energy System through Genetic Algorithm  Intunity to be exploited? A case for a 2-1 wave energy matic conditions: a generalised framework for moored reverter in Extreme Waves energy devices: Sensibility to mooring rape stiffness	Mohammad Rafiei Maria Luisa Celesti Paolino Tona  ersity of Plymouth)  1 / NREL)  Presenter Yoon-Jin Ha Dana Salar Yerai Peña-Sanchez Adam Keester Emeel Kerikous Giuseppe Giorgi Bruno Paduano Vengatesan Venugopal Katie Smith
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30 Side event	Grid integration, power take-off and control  Mitxelena/Side event 1  Baroja/Side event 2  Arriaga/Side event 3  Room/Track  Baroja/ Wave hydrodynamic modelling  Laboa/ Station-keeping, moorings and foundations	Refreshment "Supergen ORE Hu "Distribu Chairman Siming Zheng	Paper ID   152   643   582   427   485   410   419   490   468   1590   1590   1500	Laboratory Tests Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Excitation Force Estimation for a Multi-Doi? WEC Results in Mult	under energy-maximising control via a Cubature Kaman Filter Improved Design and Chillida room)  itties" (by SUPERGEN-ORE HUB - Univ  DEEC-Tec)" (by Wave Energy Scotland  all and Wind Turbine Blades University of Edinburgh)  Ittle Wavestar Type using Real-Time Hybriz Model Testing e in force control for regular waves in a robotized dry test Control Co-Design of Mave Energy Converters as Energy System through Genetic Algorithm  riturity to be exploited? A case for a 2-1 wave energy matic conditions, a generalised framework for moored inverter in Extreme Waves energy devices: Sensitivity to mooring rope stiffness looving configurations for the multi-float M4 WEC  site for a floating testing platform – a numerical approach Load Case Generator: A Web-based Tool to Support  looving Lines under Realstic Wave Corrales	Mohammad Rafiei Maria Luisa Celesti Paolino Tona  ersity of Plymouth)  A / NREL)  Presenter Yoon-Jin Ha Dana Salar Yeral Peña-Sanchez Adam Keester Emeel Kerikous Giuseppe Giorgi Bruno Paduano Vengatesan Venugopal Katie Smith Samuel Draycott  Danieta Benites-Munoz Vincent Neary Eguzkiñe Marinez
30 Side event	Grid integration, power take-off and control  Mitxelena/Side event 1  Mitxelena/Side event 2  Arriaga/Side event 3  Room/Track  Baroja/ Wave hydrodynamic modelling  Station-keeping, moorings and foundations	Refreshment "Supergen ORE Hu "Distribu Chairman Siming Zheng	Paper ID   152   643   534   582   427   485   410   419	Laboratory Tests Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Excitation Force Estimation for a Multi-Doi? WEC Results in Sensor	Less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Cubature Kahnan Filler. Improved Design and Chillida room)  Inties" (by SUPERGEN-ORE HUB - Univ  DEEC-Tec)" (by Wave Energy Scotland  Interest of the Control of the Control Interest of Edinburgh)  Rite Wavestar Type using Real-time Hybrid Model Testing e in force control for regular waves in a robotized dry test Control Co-Design of Wave Energy Converters  Interest of the Control of the Control of the Control Co-Design of Wave Energy Converters  Testing System through Genetic Algorithm Intuiting to be exploited? A case for a 2-1 wave energy matic conditions: a generalised framework for moored inverter in Extreme Waves  energy devices: Sensibility to mooring rope stiffness according configurations for the multi-float M4 WEC  Dels for a floating testing platform — a numerical approach Load Case Generator. A Viel-based Tool to Support	Presenter Yoon-Jin Ha Dana Salar Yerai Peña-Sanchez Adam Keester Emeel Kerikous Giuseppe Giorgi Bruno Paduano Vengatesan Venugopal Katie Smith Samuel Draycott  Danieta Benitas-Munoz Vincent Neary
7:30 Side event	Grid integration, power take-off and control  Mitxelena/Side event 1  Baroja/Side event 2  Arriaga/Side event 3  Room/Track  Baroja/ Wave hydrodynamic modelling  Laboa/ Station-keeping, moorings and foundations  Arriaga/ Structural mechanics - materials, fatique,	Refreshment "Supergen ORE Hu "Distribu Chairman Siming Zheng	### ### ### ### ### ### ### ### ### ##	Laboratory Testa Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Excitation Force Estimation for a Multi-DoF WEC Results Ing & posters exhibition (Terrace and d Tidal Energy research and opportun  Ided Energy Conversion Technology ( "Morphing Blades: New-Concept Tida for Unsteady Load Mitigation" (by  "Morphing Blades: New-Concept Tida for Unsteady Load Mitigation" (by  An Experimental Study for Wave Energy Converter of Technique Demonstrating real-time hydrodynamic motion respons ing with a point-absorber WEC Data-base Hydrodynamic Coefficients interpolator for r Review of TEAMER Awards for WEC-Sim Support Performance Enhancement of Fluidic Dode for a Wav Fernametre resonance: a risk to be avoided or an opponential or the service of the service	Less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Cubature Kalman Filter Improved Design and Chillida room)  Itties" (by SUPERGEN-ORE HUB - Univ DEEC-Tec)" (by Wave Energy Scotland all and Wind Turbine Blades University of Edinburgh)  Title Wavestar Type using Real-Time Hybrid Model Testing e in force control for regular waves in a robotized dry test Control Co-Design of Wave Energy Converters as Energy System through Genetic Algorithm ritting to be exploited? A case for a 2.1 wave energy matic conditions, a generalised framework for moored worder in Externer Waves energy devices. Sensitivity to mooring rope stiffness moring configurations for the multi-float M4 WEC  title for a floating testing platform — a numerical approach Load Case Generator. A Web-based Tool to Support bloomy Lines under Realstic Wave Comates stage Overtopping Wave Energy Converters mance of Transvene Ans. Cossidor Tidal Turbines mance of Transvene Ans. Cossidor Tidal Turbines mance of Transvene Ans. Cossidor Tidal Turbines man Detection of Tidal Blade Damage*	Mohammad Rafiei Maria Luisa Celesti Paolino Tona  ersity of Plymouth)  A / NREL)  Presenter Yoon-Jin Ha Dana Salar Yerai Peña-Sanchez Adam Keester Emeel Kerikous Giuseppe Giorgi Bruno Paduano Vengatesan Venugopal Katle Smith Samuel Draycott  Daniela Benites-Munoz Vincent Neary Eguzkiñe Marienez Guollang Zhang Rónán Gallagher Muslim Jameel Syed
:30 Side event	Grid integration, power take-off and control  Mitxelena/Side event 1  Baroja/Side event 2  Arriaga/Side event 3  Room/Track  Baroja/ Wave hydrodynamic modelling  Laboa/ Station-keeping, moorings and foundations  Arriaga/ Structural mechanics - materials, fatique,	Refreshment "Supergen ORE Hu "Distribu Chairman Siming Zheng	Paper ID	Laboratory Testa Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Excitation Force Estimation for a Multi-DoF WEC Results Ing & posters exhibition (Terrace and d Tidal Energy research and opportun  Ided Energy Conversion Technology ( "Morphing Blades: New-Concept Tidi for Unsteady Load Mitigation" (by  "Morphing Blades: New-Concept Tidi for Unsteady Load Mitigation" (by  An Experimental Study for Wave Energy Converter of Technique Data-base Hydrodynamic Coefficients Interpolator for Review of TEAMER Awards for WEC-Sim Support Review of TEAMER Awards for WEC-Sim Support Performance Enhancement of Fluids Dodg for a Wav Parametric Resonace: a fisik to be avoided or an opin Control systems  Performance Response of Mocean Wave Energy Converter Systems  The Dynamic response of floating offshore renewable Experimental measurements of two elastic taut-slack in  Estatewards Testing and Demonstration of the Design Ed (2200) 2 Standard Design Load Case Analysis.  Fatigue Like Assessment for Wave Energy Converter Numerical study on Overdopping Performance of Mate A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of society on the part  A Numerical study on the effect of soc	Less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Cubature Kalman Filter Improved Design and Chillida room)  Itties" (by SUPERGEN-ORE HUB - Univ DEEC-Tec)" (by Wave Energy Scotland and Wind Turbine Blades University of Edinburgh)  Ittie Wavestar Type using Real-Time Hybrid Model Testing is in force control for regular waves in a robotized dry test Control Co-Design of Wave Energy Converters  See Energy System through Genetic Algorithm intunity to be exploited? A case for a 2-1 wave energy matic conditions, a generalised framework for mound menter in Extreme Waves energy devices. Sensitivity to mooting rope stiffness energy devices. Sensitivity to the rope stiffness energy devices of the rope sti	Mohammad Rafiei Maria Luisa Celesti Paolino Tona  ersity of Plymouth)  if NREL)  Presenter Yoon-Jin Ha Dana Salar Yerai Peña-Sanchez Adam Keester Emeel Kerikous Giuseppe Giorgii Bruno Paduano Vengatesan Venugopal Katie Smith Samuel Draycott  Danieta Benitas-Munoz Vincent Neary Eguzkiñe Marinez Guollang Zhang Rönán Gallagher
:30 Side event	Mitxelena/Side event 1  Mitxelena/Side event 1  Baroja/Side event 2  Arriaga/Side event 3  Room/Track  Baroja/ Wave hydrodynanic modelling  Station-keeping, moorings and foundations  Structural mechanics - materials, fatigue, loadings	Refreshment "Supergen ORE Hu "Distribu  Chairman  Siming Zheng  Iñaki Zabala	### ### ### ### ### ### ### ### ### ##	Laboratory Testa Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Excitation Force Estimation for a Multi-DoF WEC Results Ing & posters exhibition (Terrace and d Tidal Energy research and opportun  Ided Energy Conversion Technology ( "Morphing Blades: New-Concept Tidi for Unsteady Load Mitigation" (by  An Experimental Study for Wave Energy Converter of Technique Demonstrating real-time hybridodynamic motion respons on with a portulationary with the posterior of the Technique on the Hybridodynamic Coefficients Interpolator for Technique on the Hybridodynamic Coefficients Interpolator for Review of TEAMER Awards for WEC-Sim Support Performance Enhancement of Fluidic Dode for a Wave Parametric reanance: a nak to be avoided or an oppo- converter of TEAMER (Awards for WEC-Sim Support Performance Enhancement of Fluidic Dode for a Wave Parametric reanance: a nak to be avoided or an oppo- converter of the Coefficients Interpolator for the Coefficients in t	Less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Cubatare Kahnan Filer. Improved Design and Chillida room)  Inties" (by SUPERGEN-ORE HUB - Univ DEEC-Tec)" (by Wave Energy Scotland all and Wind Turbine Blades University of Edinburgh)  Title Wavestar Type using Real-Time Hybrid Model Testing e in force control for regular waves in a robotized dry test Control Co-Design of Wave Energy Converters  as Energy System through Genetic Algorithm Intuity to be exploited? A case for a 2:1 wave energy matic conditions. a generalised framework for moored inverter in Extreme Waves energy devices: Senativity to mooring rope stiffness booking configurations for the multi-float MM WEC  Load Case Generator A Will-based Tool to Support fooring Lines under Realistic Wave Climates stage Overdopping Wave Energy Converter mance of Transverse Ass Conselow Tidal Turbines me Detection of Tidal Blade Damage* unrewable energy parks	Presenter Prosenter Yoon-Jin Ha Dana Salar Yeral Peña-Sanchez Adam Keester Emeel Kerikous Giuseppe Giorgi Bruno Paduano Vengatesan Venugopal Katie Smith Samuel Draycott Daniela Benites-Munoz Vincent Neary Eguzkiñe Martinez Guolang Zhang Rönán Gallagher Muslim Jameel Syed Christoffer Fjellstedt
30 Side event	Grid integration, power take-off and control  Mitxelena/Side event 1  Baroja/Side event 2  Arriaga/Side event 3  Room/Track  Baroja/ Wave hydrodynamic modelling  Station-keeping, moorings and foundations  Arriaga/ Structural mechanics - materials, futigue, loadings	Refreshment "Supergen ORE Hu "Distribu Chairman Siming Zheng	### ### ### ### ### ### ### ### ### ##	Laboratory Testa Assessment of a Mechanical Sensor Design considerations for a hybrid wind-wave platform Wave Excitation Force Estimation for a Multi-Dor WEC Results in Sensor S	Less MPPT Control Strategy for Tidal Turbines under energy-maximising control via a Cubature Kalman Filter. Improved Design and Chillida room)  Inties" (by SUPERGEN-ORE HUB - Univ DEEC-Tec)" (by Wave Energy Scotland all and Wind Turbine Blades University of Edinburgh)  Rite Wavestar Type using Real-Time Hybrid Model Testing e in force control for regular waves in a robotized dry test Control Co-Design of Wave Energy Converters  e Energy System through Genetic Algorithm intunity to be exploited? A case for a 2:1 wave energy matic conditions: a generalised framework for moored reverter in Extreme Waves energy devices: Sensibrity to mooring rope stiffness mooring configurations for the multi-float MM WEC  ble for a floating testing pictions—a numerical approach Loed Case Generator: A Viel-based Tool to Support Looing Lines under Rashatic Wave Climates along Condiquing Wave Energy Converters  mance of Tidal Blade Damager current energy using energy parks an Azimuthal Multi-translator Switched Reluctance entomance lest-indoors.	Presenter Presenter Yoon-Jin Ha Dana Salar Paril Peña-Sanchez Adam Kesster Emed Kerikous Giuseppe Giorgi Bruno Paduano Vengatesan Venugopal Katie Smith Samuel Draycott Daniela Benites-Munoz Vincent Neary Eguzkiñe Martinez Guollang Zhang Rönán Gallagher Muslim Jameel Syed Christoffer Fjellstedt Md Imran Ullah



	Tuesday September 5								
08:00-09:00					Registration (Main Hall)		08:00-09:00		
		Room /Track	Chairman	Paper ID 138	Title Analysis of Mutriku's OWC performance	Presenter Isabel Casas	09:00-09:15		
		Baroja/ Wave device development	Diego Vicinanza	144 266	Successful innovation strategies to overcome the technical challenges in the development of wave energy technologies  Spatial focussing of wave energy for improved power capture by an oscillating water column	Pablo Ruiz-Minguela Robert Mayon	09:15-09:30 09:30-09:45		
		and testing	Diego Vienianza	352 176	Relevance of Robustness and Uncertainties Analysis in the Optimal Design of Wave Energy Conventors  Tuning Wave Energy Conventors to local wave conditions	Filippo Giorcelli Wilson Guachamin-Acero	09:45-10:00 10:00-10:15		
				466 166	Enabling the Ocean Internet of Things with Renewable Marine Energy Intracycle Active Blade Pitch Control for Cross-Flow Tidal Turbines Using Embedded Electric Drive Systems	Mathew Topper Zhao Zhao	10:15-10:30 09:00-09:15		
		Laboa/		209 231	Numerical optimisation of the active lift turbines using OpenFoam's overset method  Non-dimensional scaling of passive adaptive blades for a marine current turbine	llan Robin Katherine Van Ness	09:15-09:30 09:30-09:45		
		Tidal device development and testing	Stephanie Ordoñez-Sanchez	264 343	Optimal Design of a Submerged Trisal Device for Low Current Environment Designing Vortex Generators for Trisal Turbine Blades	Seoung-won Jeong George Papadakis	09:45-10:00 10:00-10:15		
09:00-10:30	Oral presentations			317	Vertication and validation of MoodyNatine - A free simulation tool for modeling moosed MRE devices	Johannes Palm	10:15-10:30 09:00-09:15		
		Arriaga/		321 476	A hybrid linear potential flow - machine learning model for enhanced prediction of WEC performance  Dosign Wave analysis of the MM wave energy converted divide	Claes Eskilsson Cristine Lynggard Hansen	09:15-09:30 09:30-09:45		
	Wave hydrodynai modelling	Wave hydrodynamic	Gareth Tomas	497	Hydrodynamic studies of a 15 MW semi-submensible FOWT to assess the suitability of the inclusion of a damper system.  On the state-of-the-art of CFD simulations for wave energy converters within the open-source numerical framework of	Yu Gao Alejandro Crespo	09:45-10:00 10:00-10:15		
				158	DuaSPHysics A Study on Wave Energy Conversion Problem of Turbins-Integrated OWC Chamber	Jeong-Seok Kim	10:15-10:30		
				503 195	Large-eddy simulations of interaction between surface waves and a tidal turbine wake in a turbulent channel Actuator-Line CFD Simulation of Tidal-Steam Turbines in a Compact Array	Tim Stallard  David Apsley	09:00-09:15 09:15-09:30		
		Oteiza/Tidal hydrodynamic modelling	Tim O'Doherty	218 307	High-fit-felty modeling of a vertical axis tidal turbine model under realists flow conditions  Synthetic eddy generation and modelling of turbine operation in a turbulent tidal flow	Mikaël Grondeau Francesco Salvatore	09:30-09:45 09:45-10:00		
				367 334	A study on tital notes under the combined effects of currents and waves using actuator-line CFD simulations Impact of lateral turbine spacing on the performance of a multi-rotor tidal energy device	Federico Zilic de Arcos Bryn Townley	10:00-10:15 10:15-10:30		
10:30-11:00		Room /Track	Refre Chairman	Paper ID	networking & posters exhibition ( <i>Terrace and Chillida room</i> )  Title	Presenter	10:30-11:00		
				167 169	Experimental evaluation of phase and velocity control for a cyclorotor wave energy conventer  Wave Energy Power Taks-off Validation with a Hydraulicly Actuated Rotary Dynamometer and a Bi-directional High-power DC  Supply: Methods for validating wave energy conventers' mechanical and electrical power conversion systems	Andrei Ermakov Casey Nichols	11:00-11:15 11:15-11:30		
		Baroja/ Wave device development and testing	Claes Eskilsson	212 293	A Removable elevated-hinge wave generator for testing marine energy devices  Wave energy converter power take-off characterization; comparing dynamometer and field data	Pedro Lomonaco Curtis Rusch	11:30-11:45 11:45-12:00		
				448 499	Limiting the available pneumatic power in a U-OWC  HAPIGYM. Two Rapid Prototyping Environments for Wave Energy Control	Joao Henriques Alexandra Price	12:00-12:15 12:15-12:30		
				285 177	A methodology for developing a prediction model for the remaining fatigue life and residual strength of tidal turbine blades  Multi-Actuator Full-Scale Fatigue Test of a Tidal Blade	Tenis Ranjan Munaweera Thanthirige Sergio Lopez Dubon	11:00-11:15 11:15-11:30		
		Laboa/ Tidal device development and testing	Alberto Peña	203	Experimental techniques for evaluating the performance of high-blockage cross-flow turbine arrays  Observations from structural testing of full-scale tidal turbine blades	Aidan Hunt William Finnegan	11:30-11:45 11:45-12:00		
11:00-12:30	Oral	and testing		322 498	Experimental flow conditions effects on a bottom-mounted ducted twin vertical axis tidal turbine compared to real sea conditions Experimental comparison of the flow-induced loading between a ducted bottom-mounted twin vertical axis tidal turbine at still and	Martin Moreau Saouli	12:00-12:15 12:15-12:30		
71.00 12.00	presentations			496 628	Jan unduried crotohne  Oynamic Sinulation of Wave Point Absorbers Connected to a Central Floating Platform  Hybrodynamic and Static Stabiny Analysis of a Hybrid Offshow Wind-Mave Energy Generation; An Expansion of Semaubmenshie	Thiago Saksanian Hallak Payam Aboutalebi	11:00-11:15 11:15-11:30		
		Arriaga/ Wave hydrodynamic	Markel Peñalba	626	Reating Wind Turbine Concept Study with Large Eddy Simulations of energy dissipation due to backwash flows in wave overlooping.	Claudio Sandoval	11:30-11:45		
		modelling		383 392	Nonlinear WEC modeling using Sparse (dentification of Nonlinear Dynamics (SNDy)  Numerical and Experimental Characterization of Rotational Floating Body Drag	Brittany Lydon  Bryson Robertson  David Ogden	11:45-12:00 12:00-12:15		
				460 416	A development and validation of the its-house hydrodynamics code and the DNV software for TALOS wave energy conventer.  A turbines-module adapted to the marine site for sidal farms layout optimization.	David Ogden  Mikol Pucci	12:15-12:30 11:00-11:15		
		Oteiza/Tidal hydrodynamic	Gustavo Esteban	442 454	Hgh-fidelity modelling of a six-buthine tidal array in the Shetlands Instabilities in tidal buthine wakes	Pablo Ouro Anna Young	11:15-11:30 11:30-11:45		
		modelling	Casalvo Estebal	505 506	On the accuracy of BEMT and CFD on the power and trust prediction of tidal turbines  The performance of counter-rotating tidal turbine in different sea states	Ignazio Maria Viola Cameron Johnstone	11:45-12:00 12:00-12:15		
				544	Comparison of Actuator Line Modelling of Tidal Power Kites with ADCP Measurements	Nomal Prabahar	12:15-12:30		
12:30-14:00					Lunch & posters exhibition (Terrace and Chillida room)		12:30-14:00		
		Room /Track	Chairman	Paper ID 242	Title  Experimental Investigation into the AF-Compressibity Scaling Effect on OWC Performance and Wave Height	Presenter André F.L. Governo	14:00-14:15		
		Baroja/ Wave device development and testing		185 260	Enhancing the efficiency of an axial impulse turbine with a diffuser  Numerical performance assessment of a new wave energy conversion system	Geetam Saha André F. L. Governo	14:15-14:30 14:30-14:45		
			Yago Torre-Enciso	522 451	Basin testing of the 1-2-1 M4 WEC Experimental Investigation on Performance of Counterrotating Impulse Turbine with Middle Vanes for Wave Energy Conversion	Hugh Wolgamot Kichiro Suto	14:45-15:00 15:00-15:15		
				268	Design of an integrated generator and heaving buoy Designing Vortex Generators for Tidal Turbine Blades	Nick Baker Marinos Manolesos	15:15-15:30 14:00-14:15		
		Labos/		366	A two-scale blockage correction for an array of tidal turbines	Daniel Dehtyriov Nicholas Kaufmann	14:15-14:30 14:30-14:45		
		Tidal device development and testing	Daniel Coles	365 391 420	Performance Assessment of a Multi-Rotor Floating Tidal Energy System The Influence of the Downstream Blade Sweep on Cross-flow Turbine Performance	Abigale Snortland	14:45-15:00		
14:00-15:30	Oral presentations			504	Additive Manufacturing for Powering the Blais Economy Applications: A Tidal Turbine Blade Case Study  Ossign and Demonstration of a Passive Pitch System for Tidal Turbines	Miguel Gonzalez-Montijo Stefano Gambuzza	15:00-15:15 15:15-15:30		
				164 513	Mave Amplitration inside an Open Circular Casson for Wave Energy Conversion in Waters with Medium Energy Density System Identification for Modelling MM Wave Energy Convenier	Jiahn-Homg Chen Xuefei Wang	14:00-14:15 14:15-14:30		
		Arriagal Wave hydrodynamic modelling	Sara Russo	198 278	Semi-analytical and CFD formulations of a spherical floater  Spectral Domain Modeling of Wave Energy Converters as an Efficient Tool for Adjustment of PTO Model Parameters	Spyridon Zafeiris Jian Tan	14:30-14:45 14:45-15:00		
				333 538	A multiquery analysis of a PeWEC farm Effects of control strategies on the performance of floating WEC point absorbers operating attached to a breakwater by time- logonia simulation.	Beatrice Battisti Markos Bonovas	15:00-15:15 15:15-15:30		
				579 676	Experimental characterisation of the wake of a bottom-mounted two tandem of cylinders placed in a high velocity area  Development of a modified BEMT model for the analysis of helical bladed vertical axis tidal turbines	Alina Santa Cruz  Mohammad Fereidoonnezhad	14:00-14:15 14:15-14:30		
		Oteiza/Tidal hydrodynamic modelling	AbuBakr Bahaj	199 252	A comparative study of power production using a generic empirical model in a tital farm  Coljective Functions for the Blade Shape Optimisation of a Cross-Flow Tidal Turbine under Constraints	Kabir Bashir Shariff Karla Ruiz-Hussmann	14:30-14:45 14:45-15:00		
				283 501	Investigating the impact of multi-rotor structure shadowing on tidal stream turbine performance  A methodology to capture the single blade loads on a cross-flow tidal turbine furme model	Bryn Townley Stefan Hoerner	15:00-15:15 15:15-15:30		
15:30-16:00			Refre	shments,	networking & posters exhibition (Terrace and Chillida room)		15:30-16:00		
		Mitxelena/Side event 4			SafeWAVE project (by AZTI / WavEC)		16:00-17:30		
16:00-17:30	Side events	Baroja/Side event 5				16:00-17:30			
				Technology Performance Level Assessment (TPL) (by SANDIA LABTPL TEAM-)  NEMMO Project, On the Cutting Edge of Tidal Blade Design and Materials (by Ocean Energy Europe)					
		Arriaga/Side event 6							
		Room /Track	Chairman	Paper ID	Presenter				
				318 329	Tatle A Novel Hybrid Floating Breakwater-Wave Energy Conventor Device: Preliminary Experimental Investigations Organi-adapted claim design for sever energy convention	Sara Russo Jingyi Yang	17:30-17:45 17:45-18:00		
		Baroja/ Wave device development	Luis Gato	555	The Geometrical Design of the L-shaped Oscillating Water Column Using Artificial Neural Network	Chen-Chou Lin	18:00-18:15		
		and testing		274 516	Maximizing the surge amplitude of a floater through an adaptable monting lightening technique Reliability and Cost Assessment of Ortical Components: Electrical generator failure of IDOM wave energy converter	Andreas Asiikkis  Julia Fernandez Chozas	18:15-18:30 18:30-18:45		
				286 355	Nationageneous WEC array optimization using the Hidden Genes Genetic Algorithm  Numerical investigation of a new hybrid floating wind furbine concept	Ossama Abdelkhalik  Beatrice Fenu	18:45-19:00 17:30-17:45		
17:30-19:00	Oral presentations	Arriaga/ Wave hydrodynamic	Jesús M. Blanco	376 379	Quantification of uncertainty in linear wave energy hydrodynamic models from experimental data An ovenless of an experimental campaign for arrays of sever energy convension systems	Mahdiyeh Farajvand Nicolas Faedo	17:45-18:00 18:00-18:15		
		Wave hydrodynamic modelling		426 473	Solution verification of WECs: comparison of methods to estimate numerical uncertainties in the OES wave energy modelling task.  HydroChieno: An Open-Sourus Hydrodynamics Package for Project Chrono	Claes Eskilsson David Ogden	18:15-18:30 18:30-18:45		
				474 407	Nonlinear hydrodynamics of a heaving sphere in diffection, radiation, and combined tests Modelling the effects of boundary proximity on a tidal notor using the actuator line method	Jana Orszaghova Huw Edwards	18:45-19:00 17:30-17:45		
		Oteiza/	Doble Co. 15	464 566	Characterisation of butbulent flow and the wake of a tidal stream turbine in proximity to a ridge Tidal turbulence in medium depth water, primarily a model study	Sulaiman Hurubi Göran Broström	17:45-18:00 18:00-18:15		
		Tidal hydrodynamic modelling	Pablo Ruiz-Minguela	316 544	Verification and validation of blade-resolved viscous-flow tidal turbine simulations  Comparison of Actuator Line Modelling of Tidal Power Kites with ADCP Measurements	Manuel Rentschler  Nomal Prabahar	18:15-18:30 18:30-18:45		
19:00-20:00	Technical	Elhuyar			Technical Committee meeting		18:45-19:00 19:00-20:00		
	programme Social	9-			Track Directors Dinner				
20:00-22:00	programme	Track Directors Dinner 20:00-22:01							



				w	lednesday September 6				
0-09:00					Registration (Main Hall)				
		Room /Track	Chairman	Paper ID	Title Simulations of extreme wave load on an oscillating water column wave energy converter	Presenter Chris Chartrand			
				298	On the survivability of WECs through submergence and passive controllers	Elie Al Shami			
		Baroja/ Wave device development and testing	Gareth Tomas	393	A probabilistic framework for fatigue damage of lift based wave energy converters*  Preliminary design of an OWC wave energy converter battery charger	Abel Arredondo-Galeana D.N. Ferreira			
		und teoting		540	Development & performance enhancement of an AUV wave-charging system	Brian Rosenberg			
				550 137	A methodology to measure the energy flux captured by a submerged U-OWC by using temperature sensors  CFD analysis of hydrodynamic force on a horizontal axis tidal turbine	Luana Gumari Kai Xu			
				150	Dynamic Responses of a 1:5-Scale Ocean Current Energy Converter	Shun-Han Yang			
		Laboa/ Tidal device development	Gustavo Esteban	328	The Development of a passive blade-pitch mechanism to reduce the loads on a tidal turbine in high-flow conditions	Thomas Summers			
		and testing		348 400	Effects of non-isotropic blockage on a tidal turbine modeled with the Actuator-Line method  Intracycle Control Sensitivity of Cross-Flow Turbines	Enzo Mascrier Ari Athair			
30	Oral presentations			402	Development of an Unmanned Mobile Current Turbine Platform	Manhar Dhanak			
,0				258	Validation of the energy resource assessment with experimental data for the site selection of a tidal turbine in the Tagus River estuary.	Bénédicte Hoofd			
		Arriaga/		302 457	On tidal array layout sensitivity to regional and device model representation  Resource assessment using a combination of seabed mounted and semi-stationary vessel-	Connor Jordan Eloi Droniou			
		Tidal resource characterization	Cameron Johnstone	228	Measurements of tidal flow variability in Ramsey Sound, Pembrokeshire	Jon Miles			
				171	Investigation of Low Order Parameters Affecting Tidal Stream Energy Resource Assessments  Mapping the Unresolved Tidal Resource in Estuaries	Misha Patel  Matt Lewis			
				187	Acoustic Characterization around the CalWave Wave Energy Converter	Kaustubha Raghukumar			
		2.1.1		214	A conditional probabilistic encounter-impact model for fish-turbine interactions  SafeWAVE The contribution of the SafeWAVE EU project to the future development of ocean	Jezella Peraza			
		Oteiza/ Environemental impact and appraisal	Andrea Copping	303 623	energy Automated detection of wildlife in proximity to marine renewable energy infrastructure using	Juan Bald  David Gold			
		ана арргают		221	machine learning of underwater imagery  Choose Your Own Marine Energy Adventure Game: Collision Risk	Lenaig Hemery			
			Defendance to	284	Measurements of the wake from a floating tidal energy platform	Maricarmen Guerra Paris			
:00		Room /Track	Refreshments, n	Paper ID	& posters exhibition (Terrace and Chillida room)  Title	Presenter			
				270	Biofilm prevention in the generator of a direct drive wave energy converter	Nick Baker			
		Baroja/		330	Hydro-elastic interaction of polymer materials with regular waves	Krishnendu Puzhukkil			
		Wave device development and testing	Urko Izquierdo	380 155	Degrees of Freedom Effects on a Laboratory Scale WEC Point Absorber  Effects of projected wave climate changes on the sizing and performance of OWCs: a focus on the Mediterropage and Atlantic Funnean coastal waters.	Courtney Beringer  Irene Simonetti			
				211	the Mediterranean and Attention European coastal waters  A multi-PTO Wave Energy from temperature undesting electrons for facilities and experience of the property of the pro	Paulino Meneses Gonzale			
				216 418	Graphene oxide reinforced room-temperature-vulcanising elastomers for flexible wave energy converters  Design, Manufacture and Testing of an Open-Source Benchmark Composite Hydrokinetic Turbine	Xinyu Wang Miguel Gonzale-Montijo			
				456	Blade Wake characterization of tidal turbines in the Pentland Firth using vessel-mounted ADCP	Marion Huchet			
:30	Oral presentations	Laboa/ Tidal device development	Iñigo Bidaguren	553	Tidal Turbine Benchmarking Project: Stage I - Steady Flow Experiments	S.W. Tucker Harvey			
		and testing	iliyo bitayuren	574 567	Tidal Turbine Benchmarking Project: Stage I - Steady Flow Blind Predictions  On the design of a small scale tidal converter for long time deployment at sea	R.H.J. Wilden  Damiano Alizzio			
				301	on the design of a single scale scale contents to long sine depoyment at sea	Bulliano / WEELO			
				323	Influence of the spatial variation of upstream velocity on a vertical-axis tidal turbine performance	Lilia Flores Mateo			
		Arriaga/		339 577	Tracking a large vortex at a tidal power site  Overview of Resource and Turbine Modelling in the Tidal Stream Industry Energiser project:	Philippe Mercier Tim Stallard			
		Tidal resource characterization	Vincenzo Nava	165	TIGER Evaluating the performance of turbulence closure models for tidal stream resource characterization	Zhaoqing Yang			
				296	Tidal turbine wake characterization by vessel-mounted ADCP data analysis Estimation and characterisation of the wave-induced turbulent kinetic energy and turbulent	Patxi Garcia Novo			
				299	dissipation from ADCP data	Clément Calvino			
4:00		Room /Track	Chairman		nch & posters exhibition  prace and Chillida room)  Title	Presenter			
		Noom/Hack	- Chairman	263	A Dual Hardware-In-the-Loop (DHIL) platform for testing and validation of WEC subsystems	Giacomo Alessandri			
		Paraia/		430	Hardware-in-the-loop testing framework for active accumulator wave energy converters  Multi wave absorber platform design, modelling and testing: Investigating the integration of	Chen Zeng			
		Baroja/ Wave device development and testing	Iñigo Albaina	354 481	multiple wave energy absorbers into a floating offshore wind platform considering a future wind Analysis of data from the full-scale prototype testing of the WASP – A novel wave measuring	Nial McLean Brendan Walsh			
		und teoting		484	Open Sea Trial of a Wave-Energy Converter at Tuticorin Port – Challenges	Abdus Samad			
				576	Test rig for submerged transmissions in wave energy converters as a development tool for dynamic sealing systems	Anthon Jonsson			
				390 428	Turbine fatigue load prediction from field measurements of waves and turbulence  Development of a Tool to Optimise Tidal Stream Energy Sites	Hannah Mullings Paul Evans			
:30	Oral presentations	Arriaga/ Tidal resource	Rodolfo Olvera-Trejo	432	Principles of ADCP deployment methodologies	Penny Jeffcoate			
		characterization		467 478	Assessing wave-turbulence separation from ADCP measurements with artifical flow data	Michael Togneri  Jordi Serret			
				478 563	Multi-citieria analysis to evaluate tidal energy potential in France Improved Modelling of Vertical Velocity Profiles at a Tidal Energy Site	Jordi Serret Lilli Enders			
				220	Siting tidal energy projects through resource characterization and environmental considerations	Andrea Copping			
		Oteiza/		326 600	ITSASDRONE, an autonomous marine surface drone for fish monitoring around wave energy devices Empowering communities to participate in marine energy planning and development	Ainhize Uriarte			
		Environemental impact and appraisal	Juan Bald	374	Assessing the effect of onshore and offshore Wave Energy Converters on seafloor integrity combining image-based and acoustic methods	Grace Chang Iñigo Muxika			
				554	Effects of the spacing between two hydrokinetic turbines on the bedforms by numerical simulations	Fatima Khaled			
00			Refreshments, n	675 networking	Underwater noise impact assessment of a wave energy converter in the northern Atlantic (Spain).  & posters exhibition (Terrace and Chillida room)	José Antonio García			
		Mitxelena/Side event 7	"SUPPORTING THE FI	UTURE OF	OCEAN ENERGY HERE AND NOW; A GLIMPSE OF BASQUE PUBLIC SECTOR SCALE-UP" (by EVE)	INITIATIVES TO FOSTER			
30	Side events	Baroja/Side event 8	Wave Energy Converter Simulator (WEC-Sim) (by SANDIA LABWEC-SIM TEAM-)						
		Arriaga/Side event 9	Instrumentation for Er	nvironment	"Instrumentation al Monitoring around Marine Energy Devices" (by Coastal Science I	Division-PNNL & WavEC			
22:00	Social programme				Gala Dinner (Atrium of the Guggenheim Museum)				



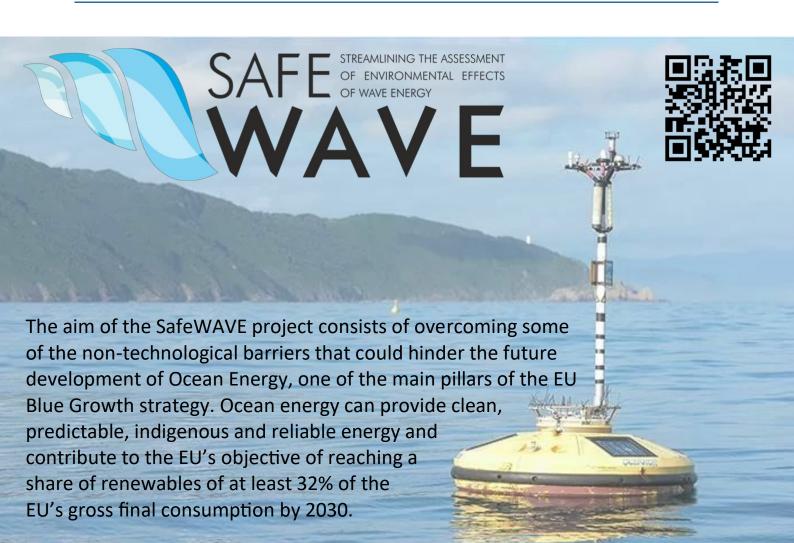
					Thursday September 7	
9:00					Registration (Main Hall)	
		Room /Track	Chairman	Paper ID	Title	Presenter
				472	A time domain approach for the optimal control of wave energy converter arrays  Optimisation of Air turbines for OWC Wave Energy Converters: Sensitivity of Realistic Wave	Mohamed Shabara
		Laboa/		493 500	Climates Integrated hydrodynamic-electrical hardware model for wave energy conversion with M4	Ander Zarketa-Astigarraga  Judith Apsley
		Grid integration, power take-off and control	Joao Henriques	409	ocean demonstrator  On data-based control-oriented modelling applications in wave energy systems	Edoardo Pasta
		take on and control		592	The Performance evaluation of 30kW class OWC wave power plant integrated with breakwater	Kilwom Kim
				161	Investigation on the extreme peak mooring force distribution of a point absorber wave energonverter with and without a survivability control system	Zahra Shahroozi
Oral				140	Analysis of the North Atlantic offshore energy flux from different reanalysis and hindcasts	Matias Alday
	Oral	Arriagal		175	Wave Spectral Analysis for designing Wave Energy Converters  Long term wave load trends against offshore monopile structures: A case study in the Bay of the Converter of the Co	Jesus Portilla-Yandun  Nahia Martinez-Iturricastillo
0:30 pr	resentations	Arriaga/ Wave resource characterization	Joannes Berque	275 279	Biscay  Numerical modelling of wave and tidal current interactions and their impact on wave	Tian Tan
		Characterization		205	parameters On the errors in annual energy yield estimation due to monodirectional wave spectra	Giulia Cervelli
				305	Validation of ERA5 Wave Energy Flux through Sator diagram in Spain (2005-2014)	Alain Ulazia
				154	Do recent renewable energy policy changes in Ireland satisfy the requirements of a nascent wave energy technology development sector?	Carrie Anne Barry
		Oteiza/		157	integration of wave energy into Energy Systems: an insignt to the system dynamics and wa forward  Can Risk-Based Approaches benefit future Marine Renewable Energy deployment, planning	George Lavidas
		Economical, social, legal and political aspects of	Pablo Ruiz-Minguela	306 351	and consenting processes?  Towards increased social acceptability of marine renewable energy	Emma Verling  Niall P. Dunphy
		ocean energy		362	Environmental Effects of MRE: Advancing the Industry through Broad Outreach and	Deborah Rose
				397	Engagement Informing development of a socioeconomic data collection toolkit for marine energy: a	Deborah Rose
11:00			Refreshments, i	networkin	ng & posters exhibition (Terrace and Chillida room)	
		Room /Track	Chairman	Paper ID	Title	Presenter
				45:	, , , , , , , , , , , , , , , , , , ,	Carrie Hall Yerai Peña-Sanchez
		Baroja/		54	<u> </u>	Pasquale Contestabile
		Wave device development and testing	Urko Izquierdo	549		Yusuf Almalki
				66	Dreakwater	Michael O'Shea
				170		Jacob Andersen
				215	Wave Farms Integration in a 100% renewable isolated small power system -frequency stabil and grid compliance analysis.	marcos Biarios
		Laborat		309	Wave-to-Wire Control of an Oscillating Water Column Wave Energy System Equipped with a Wells Turbine Maximizing Wave Energy Converter Power Extraction by Utilizing a Variable Negative	Walco Rosau
		Laboa/ Grid integration, power	Eider Robles	510	Maximizing Wave Energy Converter Power Extraction by Utilizing a Variable Negative Stiffness Magnetic Spring Development of control strategies for novel systems of a full scale OWC for the WEDUSEA	Carlos Michelen
		take-off and control		561 346	project Enhancing energy system resilience using tidal stream energy	James Kelly  Danny Coles
2:30	Oral			551	Analysis of Ocean Energy Integration in Ibero-American Electric Grids	Marcos Lafoz
presentations			529	Impact of Resource Uncertainties on the Design of Wave Energy Converters	Markel Peñalba	
				539	Discussions on Wave energy period in higher wave energy potential marine waters of Taiwa	n Shiaw-Yih Tang
		Arriaga/ Wave resource	Jesús M. Blanco	159	Internal waves: A potentially untapped marine energy resource	Kastubha Raghukumar
		characterization	ossus III. Bilaitos	197 378	Feasibility of wave energy harvesting in the Ligurian Sea Identification of optimal sites for the deployment of wave energy converters: the importance	Manuel Alejandro Corrales-González  Riccardo Novo
				558	of a technology-centred approach  Operating and Extreme weather conditions for testing Offshore Devices at Marine Renewab	Pasquale Contestabile
				399	Techno-economic optimization of an offshore hybrid power system: Argentine Basin case study	Sarah Palmer
		Otoira/		452	Ensuring Resilience in Ocean Energy Power Plants: A Survey of Cybersecurity Measures	Thalita Nazare
		Oteiza/ Economical, social, legal	Yago Torre-Enciso	340	On the complementarity of wave, tidal, wind and solar resources in Ireland	Hafiz Ashan Said
		and political aspects of ocean energy	Yago Torre-Enciso	335	A Comparison of the European Regulatory Framework for the deployment of Wave Energy Coveneriers  Ocean Energy: Markets – Currency – Impact. Dimension of & Choices in the Technology	Claudio Moscoloni
				507	Ocean Energy: Markets – Currency – Impact. Dimension of & Choices in the Technology Development Space	Jochem Weber
4:00					unch & posters exhibition Terrace and Chillida room)	
		Room /Track	Chairman	Paper ID	· ·	Presenter
		TOOM / TOOK	onda man	350	Performance enhancement of pitching WECs via oscillating water columns technology	Marco Fontana
				357	Numerical investigation of the energy performance of a wave energy converter comprising a multi-body power take-off	Félix Elefant
		Baroja/ Wave device development	Tony Lewis	395	Hybrid wind-wave systems: The case of the VoltumUS-S semi-submersible platform	Maximilian Hengstmann
		and testing	iony zomo	439	Analysis of the visibility of a radial Double Decker Turbine for application in Oscillating Water Column devices  An Early Design Phase Method for Characterizing and Comparing Wave Energy Converter	Acces December 1
				445	Archetypes	Aeron Roach
				56-	Upsampling wave temporal resolution: Investigating wave parameters and the influence on WEC power performance	Hannah Mankle
				619	9 On spatial interpolation of ocean energy source variables: A comparative analysis	Leonardo Gambarelli
5:30 <sub>pr</sub>	Oral resentations	Arriaga/ Wave resource	Jose L. Villate	479	Application of the Investor of Control Internations on the process of a decay INTO annual	Nataliia Sergiienko
		characterization		310	with adaptable nonlinear PTO	Alva Bechlenberg
				483	3 New design options for the improvement of the Mutriku power plant	Urko Izquierdo
				223	Using human-centered design to develop a national research landscape for marine energy the United States	n Samantha Quinn
				385	Choosing Wave Energy Devices for Community Led Marine Energy Development	Molly Grear
		Oteiza/ Economical, social, legal	Jochem Weber	388	A Socioeconomic, Environmental, and Regulatory Assessment for Current Energy Converte Technologies	Jonathan Colby
		and political aspects of ocean energy		413	Floating wind and wave energy technologies: applications, synergies and role in decarbonization in Portugal Wave energy communication and social opposition: can we improve perception of ocean	Craig White
				436	energy development projects?	Maria C. Uyarra
			Iñigo Ansola	Cha	air EVE (Basque Agency for Energy) 15:40-15:45	
			Irene Penesis		COE 2024 Melbourne (Australia) 15:45-15:50	
	Closing		AbuBakr Bahaj		RIMARE 2024 Southampton (UK) 15:50-15:55	
5:15	Closing ceremony	Mitxelena Auditorium	Bruce Cameron	PAI	MEC 2024 Barranquilla (Colombia) 15:55-16:00	
			C H Jo	,	AWTEC 2024 Hangzhou (China) 16:00-16:05	
			Luis Gato	E	EWTEC 2025 Madeira (Portugal) 16:05-16:10	
			Cameron Johnstone		EWTEC Executive Board 16:10-16:15	
					Tachnical visites	
0:30	Social				Technical visits: Option 1: MUTRIKU	
р	orogramme				Option 1: MUTRIKU  Option 2: BIMEP	
					Spuss 2. Suffer	
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	Technical programme				(Executive Board Meeting and Dinner)	
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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, Tolleifsen; 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 wafe 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-Hussmann; 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



Notes	





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