11th PRIMaRE Conference 2024
FINAL PROGRAMME (updated 26 June)
Day 1, Thursday 27th June, 2A/2065

SESSION	CHAIR	TITLE	PAPER #	PRESENTER	AFFILIATION	TIME
		Arrival & registration				08:00
Conference opening		Welcome from the Chair		**AbuBakr Bahaj**	University of Southampton, UK	08:50
Keynote presentation	**AbuBakr Bahaj**	A solution waiting for a problem…		**Jeremy Smith**	QED Naval Ltd	09:00
Technical session 1	**Ian Masters** Swansea University, UK	Marine growth predictions are important for accurately modelling the behaviour of dynamic power cables for FLOW, but little guidance exists on how to do this.	22	**Terry Griffiths**	Aurora Offshore Engineering and University of Western Australia	09:50
		Energy system modelling of floating offshore wind farm combined with hydrogen production	18	**Jessica Guichard**	University of Plymouth, UK	10:00
		Comparative Analysis of Offshore Wind Turbine Force Calculation Methods	23	**David Coyne**	University of Bath, UK	10:10
		Accelerating Offshore Wind Development in Indonesia: A Case Study of South Sulawesi	31	**Ika Susilawati**	ICIT Heriot-Watt University, UK	10:20
		Experimental design and prototype tests of novel floating solar platforms	17	**Chenhao Mi**	Cranfield University, UK	10:30
		BlueBox: A cloud native, MRE optimised, IoT service	33	**Mathew Topper**	Data Only Greater, UK	10:40
		Audience questions				10:50
		Refreshment break & posters (11:00-11:30, Annex Foyer)				11:00
Technical session 2	**Jun Zang** University of Bath, UK	Preliminary study of a pivoting two-body offshore WEC device with a motion rectifier system	42	**Domenico Coiro**	University of Naples, Italy	11:30
		Hydrodynamic Efficiency of U-OWC WEC Through Geometric Investigation: A Design Formulation Approach	40	**Gunay Gazaloglu**	University of Plymouth, UK	11:40
		Investigation of the Non-Linear Wave Loading of a Point Absorber Wave Energy Converter	50	**Joshua Brook-Lawson**	The University of Bath, UK	11:50
		Experimental study of multi-degree-of-freedom wave energy converter equipped with mechanical-motion-rectifier power-take-off system in wave tank	39	**Chongwei Zhang**	Dalian University of Technology, China	12:00
		Recent advancements on the design of flexible plate wave energy converters	51	**Emiliano Renzi**	Northumbria University, UK	12:10
		Audience questions				12:20
		Lunch (12:30 - 13:50, Building 38, Hartley Suite)				12:30
Technical session 3	**Andrea Diambra** University of Bristol, UK	Measuring waves and turbulence at a tidal stream demonstration site	56	**Michael Togneri**	Swansea University, UK	14:00
		Offshore substation construction and installation methods	16	**Alan Crowle**	University of Exeter, UK	14:10
		Agent-based simulations of the installation of 4.5 GW of floating offshore wind capacity in the Celtic Sea, UK	25	**Adam Roberts**	University of Plymouth, UK	14:20
		Numerical Modelling Study on Arrays of Wave Energy Converters in Real Sea-states	21	**Robert Mayon**	Dalian University of Technology, China	14:30
		Computational Fluid Dynamics simulation for an array of Floating Photovoltaics in waves	29	**Aditya Nair**	Cranfield University, UK	14:40
		Audience questions				14:50
		Refreshment break & posters (15:00 - 15:30, Annex Foyer)				15:00
Technical session 4	**Allan Mason-Jones** Cardiff University, UK	Learning based control for wave energy conversion	37	**Yao Zhang**	University of Southampton, UK	15:30
		Cost Model for Levelised Cost of Hydrogen from a Floating offshore wind farm (FLOW) in the Celtic Sea.	10	**David Pegler**	University of Plymouth, UK	15:40
		A combined experimental and computational study of floating solar farm	19	**BinJian Ou**	Cranfield University, UK	15:50
		Enhancing Design and Operation Optimisation of Tidal Range Schemes	26	**Man-Yue Lam**	Cardiff University, UK	16:00
		Wave energy converters: The application of particle swarm optimisation to hyperparameter tuning of reinforcement learning based control systems.	9	**Xuxin Pooley**	University of Exeter, UK	16:10
		Audience questions				16:20
		Tour of Boldrewood towing tank				17:00
		Conference BBQ				19:00

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Day 2, Friday 28th June, 2A/2065

SESSION	CHAIR	TITLE	PAPER #	PRESENTER	AFFILIATION	TIME
		Arrival & registration				08:00
Technical session 5	**Luke Myers** University of Southampton, UK	Remote River Energy System: Engineering considerations from a field trial	11	**Ian Masters**	Swansea University, UK	09:10
		Flow characterisation inside a scour hole of a monopile foundation	36	**Feifei Tong**	Southern Cross University	09:20
		Resource Assessment of the Queen's Marine Laboratory Tidal Test Site	20	**Carwyn Frost**	Queen's Marine Laboratory, Queen's University Belfast	09:30
		On the design of a small scale tethered tidal turbine for field experiment	34	**Domenico Coiro (stand in for Pasquale Filianoti)**	Dipartimento DIIES Università Mediterranea di Reggio Calabria	09:40
		An Experimental Study of the Effect of Winglets on the Performance of a Tidal Turbine	28	**Rodolfo Olvera**	University of Southampton, UK	09:50
		Remote River Energy System: Instrumentation and measurements from a field trial	14	**Thomas Lake**	Swansea University, UK	10:00
		Advancements in the development of GEMSTAR: a floating tethered submerged system with two hydrokinetic turbines for tidal current exploitation	41	**Domenico Coiro**	University of Naples, Italy	10:10
		Audience questions				10:20
		Refreshment break (10:30 - 11:00, Annex Foyer)				10:30
Technical session 6	**Deborah Greaves** University of Plymouth, UK	Wave Devouring Propulsion for Stabilisation of Offshore Renewable Energy Structures	48	**Liang Yang**	Cranfield University, UK	11:00
		Dynamic response of a shallow-draft floating wind turbine concept	49	**Marcin Kapitaniak**	University of Aberdeen, UK	11:10
		Enhancing a Stokes-type Gaussian Process Predictive Model for Non-Linear Wave Loading on Offshore Wind Turbine Foundations	52	**Haoyu Ding**	University of Bath, UK	11:20
		Using simulation to reduce uncertainty in the wet towing of full-scale 15 MW floating offshore wind turbines	24	**Adam Roberts**	University of Plymouth, UK	11:30
		Evidencing vessel activity through the offshore wind life-cycle using open source information	27	**Paul Newman**	University of Exeter, UK	11:40
		ROBOCONE: Design development and testing of a new robotic site investigation tool to aid the geotechnical design of offshore renewables	53	**James Creasey**	University of Bristol, UK	11:50
		Audience questions				12:00
Panel discussion	AbuBakr Bahaj	TBC		**Panelists to be announced**		12:10
Closing ceremony	PRIMaRE Chairs	Conference handover & closing remarks		**AbuBakr Bahaj**	University of Southampton, UK	12:40
		Lunch (12:50-13:50, Building 38, Hartley Suite)				12:50
		Optional Supergen Workshop: "At-Sea Component Testing for Offshore Renewables" (ACTOR) **Building 2, Lecture theatre K (room 1039)** 14.00 to 14.10 – Welcome and update on the ACTOR proposal – Prof. Deborah Greaves (University of Plymouth) 14.10 to 15.20 - Panel member presentations: Prof. Campbell Booth - Vice Dean – Research, Faculty of Engineering, University of Strathclyde (ENSIGN project and use of digital twins) – 10 mins Segoline Berthou (Met Office)/ Jon Taylor (Met Office Principal fellow in observations) – 10 mins (TBC) Prof. Matthew Palmer - Head of Science - Digital Innovation & Marine Autonomy, PML (Environmental impacts of OWFs and how autonomy provides potential for related monitoring solutions) - 10 mins Katherine York (Offshore Renewable Energy Catapult DOME Lead) - 10 mins (TBC) Jeremy Nahon (Akselos) - 10 mins Tim Stiven (The Crown Estate) - 10 mins (TBC) Dr Katie Blaney, Joint Head of Research Infrastructure EPSRC UKRI – 10 mins 15.20 to 15.45 – Refreshment Break 15.45 to 16.45 – Plenary panel discussion and Q&A with audience 16.45 to 17.00 – Next steps and close – Prof. Deborah Greaves (University of Plymouth)				14:00

POSTERS (available to view during refreshment breaks on both days)

Synergy of tidal power and flood alleviation in UK estuaries	6	Karam Kalsi	University of Southampton
Numerical simulation of fluid-solid interaction (FSI): a case study	13	Qing Lu	University of Plymouth
Estimating Wind Using Wave Buoy Measurement: A case study in the Celtic Sea	38	Jiaxin Chen	University of Plymouth
Prediction of tidal current energy resource from sparse data	43	Jon Miles	University of Plymouth
Optimising Floating Wind Turbine Layouts with Wake Modelling and Reinforcement Learning	44	Jack Lewis	University of Strathclyde
Leveraging 3D RPS Algorithm to Enhance Flow Field Monitoring for Offshore Energy Systems via Coastal Acoustic Tomography	45	Xinyi Xie	University of Plymouth
Improving Understanding of Real Ocean Waves and Their Impacts on Offshore Wind Turbine Foundations	54	Rory Nash	University of Bath
The Electric Seaway	57	Keri Collins	University of Plymouth
Tidal turbine performance enhancement through winglets	28	Rodolfo Olvera	University of Southampton
Energy system modelling of floating offshore wind farm combined with hydrogen production	18	Jessica Guichard	University of Plymouth, UK