RINA

The Royal Institution of Naval Architects

International Conference

MARINE RENEWABLE AND OFFSHORE WIND ENERGY

21 - 23 APRIL 2010

RINA HQ, LONDON, UK

MARINE RENEWABLE AND

21-23 Ap

Marine and offshore wind energy offers the potential to meet a small but significant share of the world's renewable energy aspirations. However, the maritime environment also provides many challenges in terms of economics, survivability and reliability of such systems.

Offshore wind energy had made the most rapid progress and is now starting to move into large scale commercial developments. Wave energy developments have only seen sporadic progress since the 1970's. Tidal and current stream technologies, which began serious development in the 1990's, are now at the prototype and small scale commercial development stage. Marine renewable and offshore wind energy projects involve a wide range of disciplines and expertise.

This conference brings together the industry stakeholders to provide a forum for discussion and a means of professional development for those involved with using natural marine resources to generate energy.

day 1

09.00 - 09.30 COFFEE AND REGISTRATION.

09.30 - 10.05 OFFSHORE WIND ENERGY - BALANCING RISK AND REWARD
C Nerland, H Brovold, W Grønbrekk, J Sandberg, DNV, Norway

10.05 - 10.40 RELIABILITY, MAINTAINABILITY AND LEVELLISED COSTS OF OFFSHORE WAVE ENERGY
D Malcolm, Heriot Watt University, UK

10.40 - 11.15 COMMERCIALISING WAVE AND TIDAL ENERGY: AN ENTERPRISE ROADMAP
I Watson, J Armstrong, Frazer-Nash
E Goddard, University of Bristol, UK

11.15 - 11.45 COFFEE

11.45 - 12.20 DESIGN AND DEPLOYMENT ISSUES FOR MARINE RENEWABLES INTO THE OPEN OCEAN
H Marcollo, AMOG Consulting, Australia

12.20 - 12.55 COMPONENT TEST FACILITIES FOR MARINE RENEWABLE ENERGY CONVERTERS
L Johanning, P R. Thies , G H. Smith, University of Exeter, UK

12.55 - 13.55 LUNCH

13.55 - 14.30 FOUNDATION DESIGN AND INSTALLATION CONSIDERATIONS
K Stokes, Prospect-fs, UK

14.30 - 15.05 AN INVESTIGATION INTO THE USE OF AN ARTICULATED COLUMN SUPPORTED WIND TURBINE IN WATER DEPTHS OF 60-120M.
K R Drake, T W P Smith, University College London, UK

15.05 - 15.35 COFFEE

15.35 - 16.10 A COMPARISON BETWEEN THE PRELIMINARY DESIGN STUDIES OF A FIXED AND A FLOATING SUPPORT STRUCTURE FOR A 5MW OFFSHORE WIND TURBINE IN THE NORTH SEA
M Collu, A Kolios, A Chahardehi, F Brennan, Cranfield University, UK

16.10 - 16.45 ECONOMICS AND SEAKEEPING QUALITIES OF OFFSHORE WIND FARM
A B Kartashev, V G Platonov, M S Trub, N A Waldman, Krylov Shipbuilding Research Institute, Russia

17.00 - EVENING DRINKS RECEPTION

day 2

09.00 - 09.30 COFFEE AND REGISTRATION.

09.30 - 10.05 ON THE USE OF COMPUTATIONAL ANALYSIS FOR MODELLING THE FLUID-STRUCTURE INTERACTIONS IN OFFSHORE RENEWABLE PROJECTS
S Howell, Prospect Flow Solutions, UK

10.05 - 10.40 NUMERICAL SIMULATIONS OF A FLOATING BODY IN ONE, TWO AND SIX DEGREES OF FREEDOM USING A NAVIER-STOKES SOLVER
J Westphalen, D M Greaves, C J K Williams, A Hunt-Raby, P K Stansby, T Stallard, University of Plymouth, UK

10.40 - 11.10 COFFEE

11.10 - 11.45 DEVELOPMENT OF A REACTIVE HYDRAULIC MODULATOR (RHM)
A Chapman, MacTaggart Scott, UK

11.45 - 12.20 A SYSTEM APPROACH TO TIDAL ARRAY OPTIMISATION
N Adams, D Ranford, P Grosse, J Armstrong, Frazer-Nash, UK

12.20 - 13.30 LUNCH

13.30 - 14.05 LAMINATED REINFORCED CONCRETE TECHNOLOGY FOR THE SPERBOY™ WAVE ENERGY CONVERTER
A Tucker, J M Pemberton, D T Swift-Hook, J M Swift-Hook, AquaBase Construction Ltd
J W Phillips, Embley Energy Ltd, UK

This represents a preliminary progra

14.05 - 14.40 ADVANCES IN THE DESIGN OF THE OYSTER WAVE ENERGY CONVERTER
A Henry, Aquamarine Power Ltd, UK

14.40 - 15.10 COFFEE

15.10 - 15.45 TECHNICAL CHALLENGES IN OFFSHORE WIND TURBINE GENERATOR INSTALLATION
Kazunori Masabayashi, Master Marine, Norway

15.45 - 16.20 HOW NAVAL ARCHITECTS CAN HELP THE MARINE RENEWABLE ENERGY INDUSTRY ACHIEVE SIGNIFICANT COST REDUCTIONS
J Hayman & O Burdick, Sustainable Marine Technologies Ltd, UK

16.20 - 16.55 A NUMERICAL INVESTIGATION INTO THE TUNING OF AN OSCILLATING WATER COLUMN
Tracy Somerville, Plymouth University, UK

16.55 - GENERAL DISCUSSION

day 3

08.30 - 09.00 COFFEE AND REGISTRATION.

09.00 - 09.35 ACCESSING THE FAR SHORE WIND FARM
E Dudson, C Cockburn, BMT Nigel Gee, UK

09.35 - 10.10 OPTIMIZATION OF OFFSHORE WIND FARM PLATFORM CREW AND SUPPLY VESSELS
P Melvin, Morrelli & Melvin Design & Engineering, USA

10.10 - 10.45 DESIGN AND DEVELOPMENT OF 2ND GENERATION WIND FARM SUPPORT VESSEL
A F White, Ctruk, UK

10.45 - 11.15 COFFEE

11.15 - 11.50 VESSEL DESIGN CRITERIA FOR VALUABLE ASSETS IN THE LOGISTICAL CHAIN OF OFFSHORE WIND PARK ERECTION AND MAINTENANCE
H von Wedel, Wartsila Ship Design, Germany

11.50 - 12.25 MARINE OPERATIONS FOR INSTALLATION, INTERVENTION AND DECOMMISSIONING OF OFFSHORE WINDMILLS
O T Gudmestad, University of Stavanger, Norway

12.25 - 13.30 LUNCH

13.30 - 14.05 SIZE MATTERS: ASSESSING THE LIFETIME VALUE BENEFITS OF SIZE FOR 3RD GENERATION TURBINE INSTALLATION JACK UP VESSELS
Frederic Perdrix, Houlder Ltd, UK

14.05 - 14.40 WIND TURBINE SHUTTLE - A NEW WAY OF INSTALLING WIND FARMS
A Bereznitski, Huisman Equipment BV, Netherlands

14.40 - 15.10 COFFEE

15.10 - 15.45 LIFT VESSELS AND ELECTRIC PROPULSION
U Horn, SAM Electronics GmbH, Germany

15.45 - 16.20 AN OFFSHORE WIND FARM ACCESS SYSTEM FOR 3RD GENERATION WIND FARMS
Ema Muc-Pavic, Houlder Ltd, UK

16.20 - GENERAL DISCUSSION

amme and may be subject to change

International Conference

MARINE RENEWABLE AND OFFSHORE WIND ENERGY

21 - 23 APRIL 2010
RINA HQ, LONDON, UK

To register, simply complete all sections of this form and return it with your payment to:
The Conference Department, RINA, 10 Upper Belgrave Street, London, SW1X 8BQ.
TEL: +44 (0)20 7201 2401
FAX: +44 (0)20 7259 5912
E-MAIL: conference@rina.org.uk

TITLE (Dr, Mr, Eur Ing):

NAME (as it should appear on name badge):

POSITION:

COMPANY (as it should appear on name badge):

INVOICE ADDRESS:

POSTCODE:
COUNTRY:
TELEPHONE:
FAX:
E-MAIL:

CONTACT MAILING ADDRESS (if different)**:**

POSTCODE:
COUNTRY:
TELEPHONE:
FAX:
E-MAIL:

PLEASE INDICATE YOUR PREFERRED METHOD OF PAYMENT:

I enclose a cheque for: (made payable to RINA) £

Please send me an invoice for : £

Bank Transfer details enclosed for: £

Please debit my credit card by: £

Card Number: (Visa/Amex/Mastercard)

Expiry Date: **Signature:**

REGISTRATION FEE (Inc VAT*)	**By 19/03/2010**	**After 19/03/2010**
RINA MEMBERS:	**£700**	**£800**
NON-MEMBERS:	**£800**	**£900**
CONCESSIONS: *(Retired/Students etc.)*	**£280**	**£280**
PRINCIPAL AUTHOR	**£100**	**£100**
ADDITIONAL AUTHOR	**£660**	**£660**

The registration fee includes printed conference papers, lunch, refreshments, reception, and VAT

CONFERENCE PAPERS
Conference papers will also be for sale after the event in both print and CD ROM versions. The CD ROM will also include presentations from the conference where available. If you would like to order copies, please fill in the relevant sections.

I am unable to attend the conference, please reserve me _____ set(s) of Conference proceedings

Papers @ **£100** (members) ☐ **£120** (non-members) ☐

CD ROM **£100** (members) ☐ **£120** (non-members) ☐

For a full list of the Institution's Conference papers, CD-ROM's and other technical publications please contact Josie Pearlson, Bookshop Assistant on +44 (0)20 7235 4622 or via e-mail at: publications@rina.org.uk

PAYMENTS
Payment must be made in pounds sterling by Eurocheque, cheque drawn on a bank with a UK branch address, credit card (VISA/Amex/Mastercard) or bank transfer. Please note RINA requires payment before the conference date.
Account Name: The Royal Institution of Naval Architects;
Account Number: 10042127; **Account Code:** 160016
Bank Address: Royal Bank of Scotland PLC, Belgravia Branch, 24 Grosvenor Place, London, SW1X 7HP, UK.
IBAN No: GB14RBOS16001610042127
SWIFT No: RBOSGB2L

*VAT: Under UK Customs and Excise regulations delegates from all countries are required to pay VAT on any course taking place in the UK. Delegates from outside the UK may be entitled to reclaim this cost.

VENUE
The Venue for the conference is:
RINA HQ, 10 Upper Belgrave Street, London, SW1X 8BQ.

EVENING DRINKS RECEPTION
Following the end of day one (21/04/2010), delegates are invited to attend an evening drinks reception at the conference venue.

ACCOMMODATION
Upon registration you will be provided with details of a hotel booking service offering reduced rate accommodation for conference participants.

CONTINUING PROFESSIONAL DEVELOPMENT
RINA Certificates of Attendance will be issued at the event, which contributes towards the Institution's Continuing Professional Development Scheme. For further details regarding the scheme please contact Giuseppe Gigantesco, Director, Professional Affairs on Tel: +44 (0)20 7235 4622 or e-mail: membership@rina.org.uk

STUDENT SPONSORSHIP
A number of sponsored places at this conference are available for Student Members of RINA. For more information, please contact Yuen Yee Pang, Professional Affairs, RINA on Tel: +44 (0)20 7235 4622 or e-mail:ypang@rina.org.uk.

PROMOTIONAL OPPORTUNITIES
Why not use this conference to promote your company's products and services? It provides an excellent opportunity to increase your profile and to network with a highly focused audience. We offer a number of cost effective options, including various conference sponsorship packages, exhibition space and literature distribution. If you are interested in any of these promotional opportunities please contact the Conference Organiser to discuss your individual requirements.

CANCELLATION CHARGES
The following charges will be made in the event of cancellation: £100 if received by 12/04/2010 and £200 thereafter. Cancellations received within 24 hours of the event, or in the case of non-attendance will not be refunded. Delegates may be substituted; this must be sent in writing and confirmed with the Conference Organiser.

DATA PROTECTION
Personal data is gathered in accordance with the Data Protection Act 1998. Your details may be passed to other companies who wish to communicate with you offers related to your business activities. Please tick the box below where appropriate:

☐ Please do not pass my information to any third party.

☐ I wish to receive email notification of future RINA events or publications

If you have any questions regarding this or any other RINA event please contact, Amber Williams, Conference Organiser, on:

Tel: +44 (0)20 7201 2401 Fax: +44 (0)20 7259 5912
E-Mail: awilliams@rina.org.uk www.rina.org.uk/events