



**Crowne Plaza – Providence/Warwick**  
**801 Greenwich Avenue Warwick, Rhode Island 02886**  
**www.mrec.umassd.edu/event/**  
**Technical Presentations \* Posters \* Networking \* Exhibits \***  
**Sponsorships**  
**Agendas Subject to Change**

## **Monday January 7, 2013**

**Webinar 12–1:30 PM ET**

**Introduction: John Miller, New England MREC**

**Keynote (Confirmed): Robin Wallace** – Executive Director, The UK Center for Marine Energy Research

Topic: Wave and Tide Energy Development in UK

**Session Chair: Raymond Laoulache, UMass Dartmouth**

**Improved Efficiency of Oscillating Water Column Wave Energy Conversion System**  
Frank DiBella, Concepts NREC, Inc.

**The New UNH High Speed Water Tunnel Cavitation and Hydrofoil Research for MHK Turbines**  
Ivaylo Nedyalkov, University of New Hampshire, CORE

**The Use of Acoustic Doppler Sensor Arrays in Characterizing Tidal Energy Sites**  
Duncan R. Sutherland, University of Edinburgh

**Offshore Renewable Energy Economic and Environmental Impact Optimization of Wind/Wave Commercial Scale Installation on the West Coast of Ireland**  
A.J. Posner, University College, Cork Ireland

**Hydrodynamic Modeling of Tidal Currents and Power Extraction in Chacao Channel, Chile**  
Ignacio Sepulveda, University of Valparaiso, Chile

**\*Pre-Recorded – Analysis of a Diffuser-Shrouded High-Solidity Vertical Axis Turbine Using Computational Fluid Dynamics**  
Prasun Chatterjee, University of Massachusetts-Dartmouth

## **Tuesday January 8, 2013**

**Webinar 12–1:30PM ET**

**Introduction: John Miller, New England MREC**

**Session Chair: Daniel MacDonald, UMass Dartmouth/SMAST**

**Bidirectional Ducted Tidal Turbines in Yawed Flow**  
Clarissa Belloni, University of Oxford, UK

**A Coruna Waves Energy Project**

Pedro Fernandez Carrasco, University of Politecnica de Madrid, Spain

**Mechanism of Dolphin Movement and Its Practical Application**

Sergy Goncharenko, Kiev, Ukraine

**Experimental Modeling and Initial CFD Analysis of a Compound Annular Wind, Wind/  
Marine Hydrokinetic Turbine**

Johann Sammy, Pivotal Aero Wind Turbines, In

**Wave Energy Generation Difficulties Solved by Eco Wave Power**

David Leb, Eco Wave Power, Israel

# Thursday January 10, 2013 – On-site Conference

Crowne Plaza – Agenda subject to change

8:00 AM Registration, Refreshments

8:30 AM Welcome [John Miller](#), New England MREC Director;  
**Raymond Wright**, PhD, Dean of the College of Engineering, URI

**Coffee Breaks, Networking and Posters: Sponsored By Teledyne RDI & Marine and Oceanographic Technology network (MOTN)**

9:00–10:30 AM

**NEW Session 1 – Tidal Energy: Chair– Rob Swift PhD, UNH**

**Acoustic Doppler Velocimeter with Integrated INS Accelerometer for Turbulence Measurements on Moving Platforms**

Eric Siegel, Nortek, USA

**Effect of Shroud on the Performance of Horizontal Axis Hydrokinetic Turbines**

Mohammad Shahsavarifard, University of Manitoba, Canada

**Experimental Evaluation of Mixer Ejector Hydrokinetic Turbine (MEHT)**

Matthew Rowell, University of New Hampshire, CORE

**The Next Generation Hydrokinetic Turbine**

Jeffrey King, FloDesign Inc.

**Dynamics of a Surface Platform for Testing Hydrokinetic Turbines** Toby Dewhurst,

University of New Hampshire, CORE

10:30–10:45

**Coffee Break, Networking, Posters, Exhibits: Sponsored By Teledyne RDI & Marine and Oceanographic Technology network (MOTN)**

10:45 –11:30 AM

**New Session 2 – Wave Energy: Chair– Dan MacDonald, PhD, SMAST, UMD**

**Modeling of the Efficiency of a submerged ocean wave energy converter**

Michael MacNicoll, University of Maine

**Innovations in Near-Shore Wave Energy Conversion**

Cliff Goudey, Resolute Marine Energy Inc.

**Small Point Absorber Buoys for Wave Energy Harvesting: An Overview of Design, Numerical Modeling, and Field Testing,**

Dr. Stephan Grilli, University of Rhode Island

11:30 AM–12:30 PM

**New Session 3 – Modeling of Ocean Energy Devices: Chair–Martin Wosnik PhD, UNH CORE**

**Computational Simulations of Wave Energy Converters by Solving the Navier –Stokes Equations**

Amirmahehi Ghasemi, University of Massachusetts–Dartmouth

**Modeling Hydrokinetic Turbine Performance**

Patrick Karalekas, Northeastern University

**Use of Numerical Modeling to Optimize a New Wave Energy Converter Technology**

Brandon Green, University of Massachusetts–Dartmouth

**12:30–1:30 PM**

**Lunch, Networking, Posters, Exhibits**

**1:30–2:30 PM**

**New Session 4 – Offshore Wind Energy: Chair–Amardeep Dhanju, PhD, BOEM**

**Wind, wave, and current observations in the Mass. RFI Area Using High Frequency Radar**

Anthony Kirincich, Woods Hole Oceanographic Institution

**A Global Support Structure Optimization Framework for Floating Offshore Wind Turbines**

Matthew Hall, University of Victoria, Canada

**The axisymmetric turbulent wake with rotation and its affect on offshore wind farm production**

Nathaniel Dufreshne, University of New Hampshire, CORE

**2:30–3:45 PM**

**New Session 5–Environmental Impacts: Chair–Brian Howes, PhD, SMAST–UMD**

**Baseline characterization of Ichthyoplankton Near a Proposed OTEC Warm Water Intake in Kauai**

Timothy Hogan, Alden Inc.

**Listening to Warblers and Whales for Wind and Wave Energy: Bioacoustic Monitoring Strategies to Complement Environmental Risk Assessments for Marine Renewable Energy Projects**

Harold A. Cheyne, Cornell University

**Renewable Ocean Energy Research Program for North Carolina**

Lindsay Dubbs, University of North Carolina Coastal Studies Institute

**Assessment of Zooplankton Injury and Mortality from Blade Strikes, Shear Stress, and Exposure to Cavitation Resulting from the Deployment**

David Schlezinger, SMAST, UMass Dartmouth

**3:45–4:15 PM**

**Coffee Break, Networking, Posters, Exhibits: Sponsored By Teledyne RDI & Marine and Oceanographic Technology network (MOTN)**

**3:15–5:30 PM**

**New Session 6–Modeling of Ocean Energy Resources: Chair– Raymond Laoulache PHd, UMD**

**Submarine Cable Embedment: Integrating Suspended Sediment Modeling and Monitoring into the Regulatory Permit Process**

Payson R. Whitney/Susan M. Herz, ESS Group, Inc.

**A High Resolution Model for the Resource Assessment of Tidal Kinetic Energy and Evaluation of Environmental Impacts**

Ara Hakim, University of Massachusetts–Dartmouth

**Wave Energy Conversion Methods Applied to Shore Protection**

Michael McCormick, United States Naval Academy/Robert C. Murtha, Murtech, Inc.

**Ocean Current Energy Assessment for the Gulf Stream**

Xiufen Yang, Georgia Institute of Technology

**5:30–7:00 PM**

**Reception for all Attendees, Sponsored by Rhode Island Economic Development Corp. & Providence/Warwick Convention and Visitors Bureau**

## Posters and Exhibits

Posters and Exhibits will be displayed outside the conference room

Thursday January 10, 2013

### Posters

#### Dynamo I and River Dynamo II

James Monroe, Blue Water Dynamos

#### A New Look at Instream Hydropower

George McBride, Proprietor

#### Data Critical Marine Systems running for Long Periods of Time

John Merlino, Sirius Integrator

#### Muskeget Channel Tidal Energy Test Site: Test Platform Design

Toby Dewhurst, University of New Hampshire, CORE

#### Apparatuses Powered by Waves or Flowing Currents

Henry Teng Choy, Blue Energy

#### New England Test and Development Infrastructure for Tidal/Ocean/River Current Energy Technology

John H. Miller, New England MREC

#### Measuring Winds, Waves and Currents over the southern New England Shelf using land-based sensors

Anthony Kirincich, Woods Hole Oceanographic Institution

## Exhibitors Include:

- Teledyne RDI, Poway, CA; Margo Newcombe, [mnewcombe@teledyne.com](mailto:mnewcombe@teledyne.com) (tentative)
- Rhode Island Economic Development Corporation; John Riendeau, [jriendea@riedc.com](mailto:jriendea@riedc.com)
- Resolute Marine Energy, Inc. Boston, MA; Bill Staby, [wstaby@resolute-marine-energy.com](mailto:wstaby@resolute-marine-energy.com)
- OceanServer Technology, Inc. Fall River, MA; Bob Anderson, [anderson@ocean-server.com](mailto:anderson@ocean-server.com)
- University of New Hampshire Center for Ocean Renewable Energy, Durham, NH; Ken Baldwin, [Kenneth.Baldwin@unh.edu](mailto:Kenneth.Baldwin@unh.edu)
- Providence Warwick Convention and Visitor Bureau; Erin Degulis; [EDegulis@pwcvb.com](mailto:EDegulis@pwcvb.com)
- Marine Technology Society, Washington, DC; Rich Lawson, [rich.lawson@mtsociety.org](mailto:rich.lawson@mtsociety.org)
- Marine and Oceanographic Technology Network, Harlan Doliner, [hdoliner@verrilldana.com](mailto:hdoliner@verrilldana.com)
- New England Marine Renewable Energy Center MREC, New Bedford, MA; John Miller, [j2miller@umassd.edu](mailto:j2miller@umassd.edu)
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