

4th Oxford Tidal Energy Workshop (OTE 2015)

Final Programme

23rd March 2015

- 11:00 - 11:10 Opening
- 11:10 - 12:25 Session 1: Devices and Turbulence
- 11:10** *Measuring Turbulent Structures in Tidal Channels*
 Anna Young (University of Cambridge)
- 11:35** *Large Eddy Simulations to Represent a Full-scale Tidal Stream Flow and Turbine*
 Umair Ahmed (University of Manchester)
- 12:00** *A Synthetic Turbulence Model for Numerical Simulation of Marine Current Turbine*
 Grégory Pinon (Université du Havre)
- 12:25 - 12:40 Poster Presentations (1)
- 12:40 - 14:00 Lunch
- 14:00 - 15:15 Session 2: Turbulence and Waves
- 14:00** *Impacts of In-Stream Tidal Current Turbines on Sediment Dynamics in the Minas Basin, Bay of Fundy, Canada*
 Ryan Mulligan (Queen's University)
- 14:25** *Characterising the Variability of the Tidal-stream Energy Resource over the Northwest European Shelf Seas*
 Peter Robins (Bangor University)
- 14:50** *Wave-Current Interaction in the Bristol Channel and the Implications of a Severn Barrage on Wave Climate*
 Iain Fairley (Swansea University)
- 15:15 - 15:25 Poster Presentations (2)
- 15:30 - 16:00 Coffee
- 16:00 - 17:40 Session 3: Devices and Arrays
- 16:00** *Flexible Blades for Tidal Turbines*
 Ignazio Maria Viola (University of Edinburgh)
- 16:25** *A Blade Design Method of the Horizontal Axis Tidal Current Turbine*
 Xiaohang Wang (Harbin Engineering University)
- 16:50** *Power and Thrust Behaviour in a Porous Disc Fence Array Experiment*
 Susannah Cooke (University of Oxford)
- 17:15** *Hydrodynamic and Ecological Impacts of Turbine Structures: Insights from the FLOWBEC Platform*
 Shaun Fraser (University of Aberdeen)
- 18:45 - Drinks reception & Dinner
 St Edmund Hall, OX1 4AR

24th March 2015

9:00 - 10:40 Session 4: Field Scale Turbulence

- 9:00** *Field Characterisation of Currents and Near Surface Eddies in the Pentland Firth*
Jonathan Hardwick (University of Exeter)
- 9:25** *Traditional Turbulence Methods and Novel Visualisation Techniques for Coastal Flow Model in Order to Deploy Tidal Stream Turbines*
Ian Masters (Swansea University)
- 9:50** *Simplified Wake Models for Small Tidal Farms: Reduced Scale Evaluation and Array Loading Study*
David Sudall (University of Manchester)
- 10:15** *Micrositing and Turbulence*
Michael Togneri (Swansea University)

10:40 - 11:10 Coffee

11:10 - 12:25 Session 5: Basin Modelling (2)

- 11:10** *Intermittency and Predictability of Tidal Stream Power*
Thomas Adcock (University of Oxford)
- 11:35** *The Importance of Tidal Phasing on Leasing for Tidal Energy Schemes*
Simon Neill (Bangor University)
- 12:00** *The Effects of Tidal Farms in Estuaries under Extreme Coastal and Fluvial Events*
Miriam Garcia-Oliva (University of Exeter)

12:25 - 12:40 Poster Presentations (3)

12:40 - 14:00 Lunch

14:00 - 15:15 Session 6: Devices and Control

- 14:00** *A Numerical Study of Vertical Axis Tidal Turbines' Performance Improvement by Active Pitch Control*
Pierre-Luc Delafin (Cranfield University)
- 14:25** *Power Shedding from Stall and Pitch Controlled Tidal Stream Turbines*
Matt Edmunds (Swansea University)
- 14:50** *Investigation on H-shape Vertical Axis Turbine with Flexible Blade*
Wendi Liu (University of Strathclyde)

15:15 - 15:30 Closing

Poster Presentations (1):

Modelling Hydrodynamic and Morphodynamic Effects at Ramsey Sound
David Haverson (University of Edinburgh)

The Distribution of the Irish Sea Tidal-stream Resource
Matt Lewis (Bangor University)

The Sensitivity of Tidal Resonance in the Bristol Channel
Chanshu Gao (University of Oxford)

Poster Presentations (2):

Investigation on the Hydrodynamics of the Catamaran Hull of a Floating Tidal Power Generation Device
Qing Xiao (University of Strathclyde)

3D Extraction of Tidal Energy from a ROMS Model
Alice Goward Brown (Bangor University)

Poster Presentations (3):

Moving Meshes and Virtual Porpoise
Thomas Lake (Swansea University)

Analytical Model for Tidal Farm Design with Free-surface Deformation Effect
Vikrant Gupta (University of Cambridge)

Characterising the Tidal Energy Resource of Pembrokeshire
Sophie Ward (Bangor University)