

2nd Oxford Tidal Energy Workshop (OTE 2013)

Final Programme

18th March 2013

- 11:00 - 11:10 Opening
- 11:10 - 12:50 Session 1: Device Scale Problems (1)
- 11:10 *CFD predicted effect of EMEC velocity profiles on a tidal stream turbine*
James McNaughton (University of Manchester)
- 11:35 *Validation of an Actuator Line Model for Tidal Turbine Simulations*
Justine Schluntz (University of Oxford)
- 12:00 *Hydrodynamics of tidal-stream turbines in unsteady flow*
Duncan M. McNae (Imperial College London)
- 12:25 *Influence of support structure response on extreme loading of a tidal turbine due to turbulent flow and waves*
E. Fernandez Rodriguez (University of Manchester)
- 12:50 - 14:00 Lunch
- 14:00 - 15:15 Session 2: Turbulence and Waves
- 14:00 *Examination of Turbulence Characteristics Calculated Using the Variance Method*
Michael Togneri (Swansea University)
- 14:25 *Analysis of length scales in open channel flow for inlet definition of LES of tidal stream turbines*
S. Rolfo (University of Manchester)
- 14:50 *The Effects of Wave-Current Interactions on the Performance of Horizontal Axis Tidal-Stream Turbines*
Tiago A. de Jesus Henriques (University of Liverpool)
- 15:15 - 15:45 Coffee
- 15:45 - 17:00 Session 3: Array Scale Problems
- 15:45 *Adjoint based optimisation of turbine farm layouts*
Stephan C. Kramer (Imperial College London)
- 16:10 *Impact of tidal energy arrays located in regions of tidal asymmetry*
Simon P. Neill (Bangor University)
- 16:35 *Beyond the Betz Theory - Blockage, Wake Mixing and Turbulence*
Takafumi Nishino (University of Oxford)
- 18:30 - Dinner

19th March 2013

- 9:30 - 10:45 Session 4: Geographic Scale Problems
- 9:30 *On the optimum place to locate a tidal fence in the Severn Estuary*
Scott Draper (University of Western Australia)

	9:55	<i>Tidal Stream Energy Assessment of the Anglesey Skerries</i> Sena Serhadhođlu (University of Oxford)
	10:20	<i>Influence of tidal energy extraction on fine sediment dynamics</i> Peter E. Robins (Bangor University)
10:45 - 11:10		Coffee
11:10 - 12:50		Session 5: Device Wake, Interaction and Environment
	11:10	<i>On the performance of axially aligned tidal stream turbines using a Blade Element Disk approach</i> Ian Masters (Swansea University)
	11:35	<i>Characterisation of the near-wake of a Horizontal Axis Tidal Stream Turbine in Non-uniform steady flow</i> Siân C. Tedds (University of Liverpool)
	12:00	<i>Tidal Turbine Wake Recovery due to Turbulent Flow and Opposing Waves</i> Alex Olczak (University of Manchester)
	12:25	<i>Individual Based Modelling Techniques and Marine Energy</i> Thomas Lake (Swansea University)
12:50 - 13:40		Lunch
13:40 - 15:20		Session 6: Device Scale Problems (2)
	13:40	<i>CFD Analysis of a Single MRL Tidal Turbine</i> Matthew Berry (University of Exeter)
	14:05	<i>Numerical Modelling of a Laboratory Scale Tidal Turbine</i> Robert M. Stringer (University of Bath)
	14:30	<i>Progress on Large Vertical Axis Tidal Stream Rotors</i> Stephen Salter (University of Edinburgh)
	14:55	<i>Comparisons of computational predictions and experimental measurements of ducted tidal turbine performance</i> Conor F. Fleming (University of Oxford)
15:20 - 15:30		Closing

Poster presentations:

Investigating the Impacts of renewable on Coastal Hydrodynamics and Sediment Transport
Daniel Eddon (University of Liverpool)

Impact of wind variability on marine current turbines
Alice J. Goward Brown (Bangor University)

The importance of inter-annual variability in assessing the environmental impact of tidal energy schemes
Matt Lewis (Bangor University)

Tidal Channel Flow Alterations due to Turbine Arrays
Susannah Cooke (University of Oxford)