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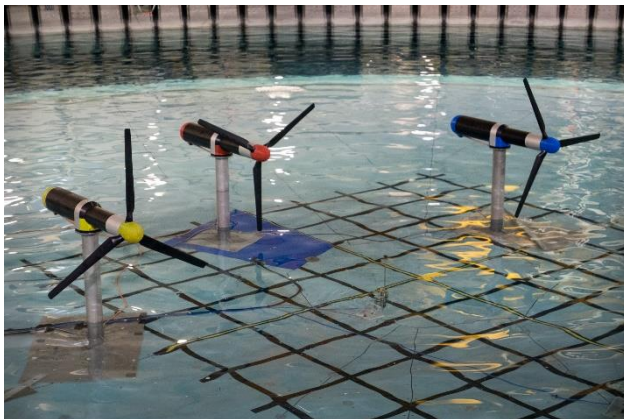


# Test and verification processes from tanks to the sea

**Organised by:** The University of Edinburgh and the European Marine Energy Centre

**Location:** Classroom 5, Hudson Beare Building, Kings Buildings, The University of Edinburgh, Edinburgh, UK, EH9 3DW

**Dates:** 23-25 April 2019



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## Course Outline

### **23/04/2019: Standards and verification for offshore renewable energy**

**09:30 – 10:30** Introduction

Speakers: David Ingram, Tom Davey, Ruari Brooker

**10:45 – 12:00** Capturing and simulating the ocean for testing ORE

Speakers: Brian Sellar

**13:00 – 14:00** Role of standards for tank testing of offshore renewable energy systems

Speakers: Tom Davey

**14:00 – 15:00** MARINET D2.1: Summary of deliverable and identified gaps in standards by the MARINET2 consortium

Speakers: Donald Noble

**15:30 – 16:30** Role of standards for site deployments

Speakers: Ruari Brooker

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### **24/04/2019: Experimental testing**

**09:00 – 10:30** Experimental design and site replication

Speakers: Sam Draycott

**10:45 – 12:00** Measurement and data considerations

Speakers: Tom Davey

**13:00 – 15:30** Practical tank testing exercise @ The FloWave Ocean Energy Research Facility

Speakers/Demonstrators: Tom Davey, Sam Draycott, TBC

**16:00 – 17:00** Implementation of a standardized test programme: Wave Energy Scotland

Speakers: Tom Davey, WES speaker TBC

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### **25/04/2019: Site deployment**

**09:00 – 09:30** EMEC deployment history

Speakers: Florence Ungaro

**09:30 – 10:30** Practicalities of deploying at sea

Speakers: Florence Ungaro

**10:45 – 12:00** Metocean data collection

Speakers: Ruari Brooker



**13:00 – 14:30** Performance Assessment Exercise in Wave and Tidal  
Speakers: Ruari Brooker

**15:00 – 15:30** Case studies of deployments at EMEC  
Speakers: Florence Ungaro

**15:30 – 16:30** Developer talk  
Speakers: TBC

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Day 1		Day 2		Day 3	
09:00 - 09:30	Registration	09:00 - 09:30	Experimental Design and Site Replication	09:00 - 09:30	EMEC Deployment History
09:30 - 10:00	Introduction	09:30 - 10:00		09:30 - 10:00	Deployment Considerations: Practicalities of deploying at sea
10:00 - 10:30		Coffee break	10:00 - 10:30	10:00 - 10:30	Coffee break
10:30 - 10:45	Capturing and simulating the ocean for testing ORE	10:30 - 10:45	Measurement and data considerations	10:30 - 10:45	Deployment Considerations 2: MetOcean Data Collection
10:45 - 11:30		10:45 - 11:30		10:45 - 11:30	
11:30 - 12:00	Lunch	11:30 - 12:00	Lunch	11:30 - 12:00	Lunch
12:00 - 12:30		12:00 - 12:30		12:00 - 12:30	
12:30 - 13:00	Role of standards for tank testing of offshore renewable energy systems	12:30 - 13:00	Practical tank testing exercise @ The FloWave Ocean Energy Research Facility	12:30 - 13:00	Performance Assessment Exercise in Wave and Tidal
13:00 - 13:30		13:00 - 13:30		13:00 - 13:30	
13:30 - 14:00	MaRINET D2.1: Summary of deliverable and identified gaps in standards by the MaRINET2 consortium	13:30 - 14:00	Coffee break	13:30 - 14:00	Coffee break
14:00 - 14:30		14:00 - 14:30		14:00 - 14:30	
14:30 - 15:00	Coffee break	14:30 - 15:00	Implementation of a standardized test programme: Wave Energy Scotland	14:30 - 15:00	Case Studies of deployments at EMEC
15:00 - 15:30		15:00 - 15:30		15:00 - 15:30	
15:30 - 16:00	Role of standards for site deployments	15:30 - 16:00	Developer Talk	15:30 - 16:00	Developer Talk
16:00 - 16:30		16:00 - 16:30		16:00 - 16:30	
		16:30 - 17:00			

	FloWave
	EMEC
	External



## Transport

### Travelling from Edinburgh Airport to city centre:

**Bus to city centre:** There is a shuttle bus (AirLink 100) which goes from the airport to the town centre. This takes about 30 minutes. From here there are a number of buses which can be taken to the course location (see below: travelling to Kings Buildings).

**Tram to city centre:** Alternatively there is a tram service from the airport which also goes to the city centre. This also takes about 30 minutes.

**Taxi to city centre:** This is the fastest travel option, and can be taken to the town centre or to the course location for around £25-£35, and will take 25-30 minutes.

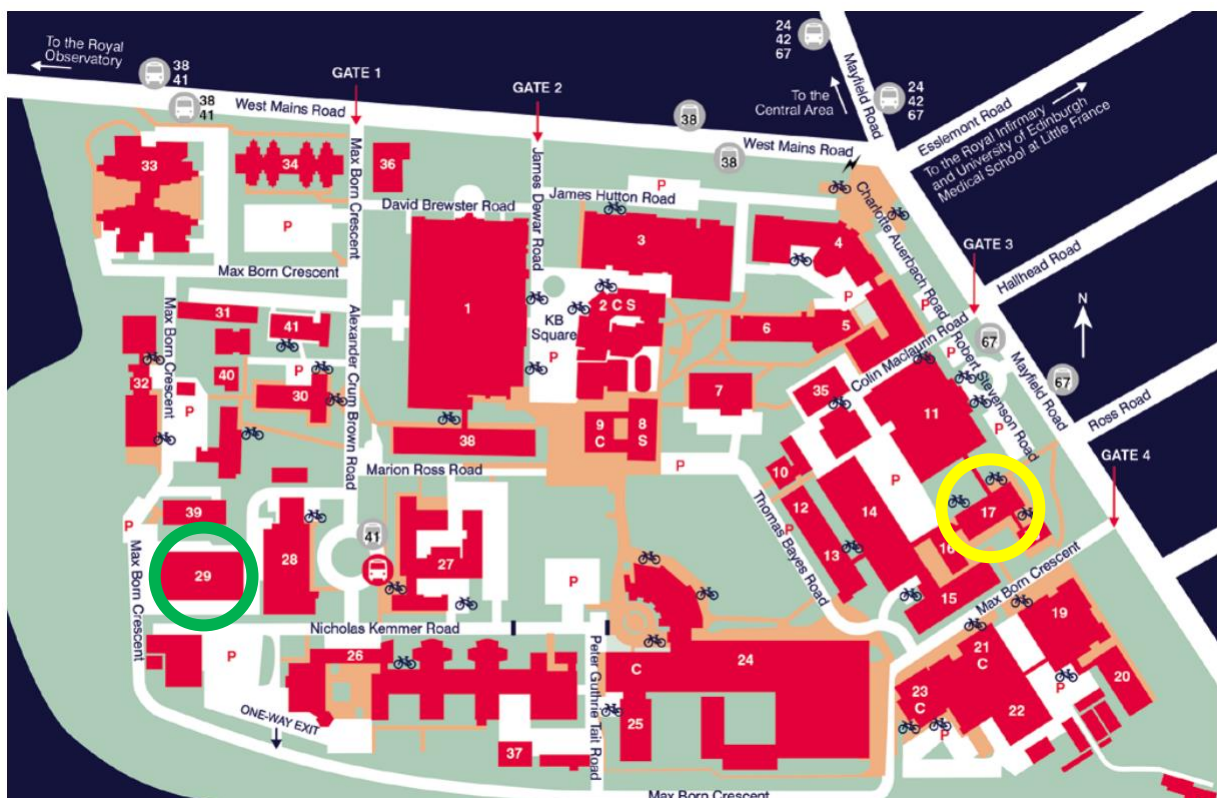
### Travelling from Edinburgh town centre and Edinburgh Waverley Train Station to the Kings Buildings campus:

**Bus to Kings Buildings (course location):** The number 41 can be taken which goes into the Kings Buildings campus (25 minutes). Alternatively there are a number of buses which can be taken which arrive nearby. Numbers 42/67 arrive approximately 2 minutes' walk away, and numbers 3/8/29/31/27 arrive about 5 minutes' walk away.

**Taxi to Kings Buildings:** This will take around 10 minutes and cost around £10-£15 (directly from airport around £30)

### Finding the building:

The course will take place in Classroom 5, Hudson Beare building on the Kings Buildings campus. This is indicated by the yellow circle on the map below (building 17). Course attendees will be led to FloWave during the course, which is highlighted by the green circle (building 29).





## Accommodation

### **Accommodation nearby to Kings Buildings:**

Nearby hotel:

1. Travelodge Edinburgh Cameron Toll

There are number of B&B's close by. For example:

1. Smith's Guest House, Mayfield Road
2. Lauderville Guest House, Mayfield Road
3. No 45, Gilmour Road
4. Kingsley Edinburgh, Craigmillar Park

### **In town centre:**

There are also a wide range of hotels and B&B options in the city centre. Places like Booking.com, Tripadvisor, Trivago etc. provide extensive options.

Additionally, the University also offers additional guidance on accommodation which can be found here: <https://www.accom.ed.ac.uk/for-visitors/>