

COST CA 20109 – Strategic Workshop

Energy Islands – Technical Challenges and Industrial Opportunities

Program Overview

DATE:	15 and 16 May, 2023
Time	Day 1: 08h30 – 18h15 (CET) Day 2: 09h00 – 13h00 (CET)
Place	Belval, Esch-sur-Alzette, Luxembourg
Venue	University of Luxembourg – Campus Belval, Maison des Sciences Humaines (MSH), Black Box
Host	Dr.-Ing Anina Glumac (anina.glumac@uni.lu)
Webpage	https://modenerlands.eu/activities/events/strategic-workshop-2023/

15th May (Monday)		
8:30 - 9:00	Registration	MSH
<i>Plenary Sessions</i>		Black Box (MSH)
9:00 - 9:15	Welcome	Anina Glumac & Stephane Bordas
9:15 - 9:30	Overview of the COST Action and SW	Carlos Rebelo
9:30 - 10:00	Invited Lecture	Ricardo Renedo Williams (EC)
10:00 - 10:30	Invited Lecture	Pedro Rodriguez (Lux. Inst. Science)
10:30 - 11:00	Coffee-break & POSTER Session	
11:00 - 11:30	Invited Lecture	William Otto (Space@sea)
11:30 – 12:00	Invited Lecture	Sarah Thomas (North Sea FPP)
12:00 - 13:15	Lunch break	
13:15 - 14:15	Special session Training School Chania	Presentations by TS Students
14:15 - 14:30	Overview of WG1 developments	Hassan Hemida
14:30 - 16:00	Presentations by WG1 members	
16:00 - 16:30	Coffee-break	
16:30 - 16:45	Overview of WG2 developments	M. Gkantou & A. Malekjafarian
16:45 – 18:15	Presentations by WG2 members	
20:00	Dinner	Snooze Pub
16th May (Tuesday)		
9:00 - 9:30	Invited Lecture	Paulo Brito (WIRE – CA20127)
9:30 – 10:00	Invited Lecture	Mohammad R.S. Mohammadi (DNV)
10:00 – 10:30	Invited Lecture	Lúcio Rodrigues (PP Inc.)
10:30 - 10:45	Overview of WG3 developments	Ruben Paul Borg
10:45 - 11:15	Coffee-break	
11:15 – 12:45	Presentations by WG3 members	
12:45– 13:00	Closure of workshop	Charalampos Baniotopoulos, Carlos Rebelo & Anina Glumac
13:00	Lunch and Fairwell	

Invited Lectures		
15th May (Monday)		
09:30 - 10:00	Ricardo Renedo Williams	t.b.a.
10:00 - 10:30	Pedro Rodriguez	Energy Storage as a Key Enabling Technology for Renewable Energy Integration
11:00 - 11:30	William Otto	Energy Islands; Fixed or (partially) floating?
11:30 - 12:00	Sarah Thomas	Providing Reliable (dispatchable) Renewable Energy to off-grid locations
Special session Training School Chania		
15th May (Monday)		
13:15 - 13:30	Ramon Varghese	Conceptual Design of a Floating Modular Energy Island for Energy Independency: A Case Study in Crete
13:30 - 13:45	Eray Caceoğlu	Towards novel modular energy islands – a case study of Crete, Greece
13:45 - 14:00	Marin Ivankovic	Conceptual design of a sustainable floating energy island to satisfy Crete's electricity demand
14:00 - 14:15	Bodan Velkovski	Conceptual Design of a Modular Energy Island for Crete
Presentations by WG1 members		
15th May (Monday)		
14:30 - 14:45	Félix Nieto	Large scale energy harvesting in the context of Energy Islands: eh-Tower technology potential benefits and challenges
14:45 - 15:00	Tamara Bajc	Methodology for the application of floating photovoltaic systems on water bodies
15:00 - 15:15	Zhiyu Jiang	Recent developments in floating photovoltaic concepts
15:15 - 15:30	Fatih Karipoğlu	Ranking criteria for hybrid offshore energy systems using Fuzzy AHP
15:30 - 15:45	Leonardo Micheli	From land to water: opportunities and challenges for floating photovoltaic applications
15:45 - 16:00	António Couto	Exploring wind and solar complementarity to increase the value of the renewable energy islands concep
Presentations by WG2 members		
15th May (Monday)		
16:45 - 17:00	Stefano Lenci	Along- and cross-wind coupled nonlinear oscillations in wind turbines
17:00 - 17:15	Junlin Heng	Digital twins-enabled probabilistic deterioration assessment of floating offshore wind turbine towers under uncertainties

17:15 - 17:30	Amiya Pandit	Effectiveness of passive TMD vibration controller on the damaged spar-type floating offshore wind turbine.
17:30 - 17:45	Mariela Mendez Morales	An overview of fatigue behaviour in additively manufactured metals under cyclic loading
17:45 - 18:00	Giulio Ferri	Site-specific cost minimization of floating offshore wind turbines
18:00 - 18:15	Paul E. Thomassen	Quasi-automated fatigue lifetime design of floating energy islands
Invited Lectures		
16th May (Tuesday)		
09:00 - 09:30	Paulo Brito	Hydrogen and renewable gases production from Waste
09:30 - 10:00	Mohammad Shah	Life Cycle Assessment Topic in Energy Transmission & Distribution
10:00 - 10:30	Lucio Rodrigues	Going commercial scale based on supply chain studies and real-life floating wind projects
Presentations by WG3 members		
16th May (Tuesday)		
11:15 - 11:30	Jovan Todorovic	Power system operation challenges with an energy island integrated
11:30 - 11:45	David C. Finger	Climate-Neutral Europe: the Role of Renewable Energies in the Arctic to decarbonize Europe and enhance energy independence
11:45 - 12:00	Amir R. Nejad	On the Energy Islands and Green Corridors: Towards Green Energy Transitions
12:15 - 12:30	Snezana Cundeva	Grid integration of the renewable energy from sustainable energy islands
12:30 - 12:45	Luana Tesch	Life cycle environmental impacts of renewable offshore energies: A systematic review
12:45 – 13:00	Maria-Styliani Daraki	Passive Shunted Piezoelectric Systems for Vibration Control of Wind Turbine Towers. A feasibility study