

The pathways to achieve net-zero emissions targets are associated with considerable uncertainty.

Stringent environmental regulations, volatile fuel prices, alternative fuels, development of emerging technologies and concerns around supply chains and infrastructure present both challenges and opportunities to the maritime industry.

The need to address these contemporary challenges within the maritime industry has never been greater.

In doing so, the IMarEST Scottish Branch is organising its first symposium: Maritime Industry Decarbonisation - The Paradigm to Achieve Net-Zero Targets.

This event will bring together scientists, engineers and other professionals from across academia, government, research institutions and industry bodies.

| 09:00 | WELCOME ADDRESSES Cdr Robert Prideaux, FIMarEST, CEng, CMarEng, Scottish Branch Chair |
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| 09:15 | MSP Paul Sweeney, Chair, Cross-Party Group in the Scottish Parliament on Maritime and Shipbuilding |

SESSION ONE: DECARBONISATION

Chairs: Prof Gerasimos Theotokatos FIMarEST, DNV Professor of Safety of Marine Systems, University of Strathclyde; Prof Ibrahim Abdelaty, FIMarEST, CEng, CMarEng, University of Strathclyde

| 09:30 | CMAL – A JOURNEY TO NET ZERO Speaker: Lewis Hammell, Caledonian Maritime Assets Limited (CMAL) |
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| 09:45 | PRACTICAL EXPERIENCE OF HYBRID OPERATIONS AND FUTURE OF DECARBONISING SCOTTISH WEST COAST FERRIES Speaker: Alex Cross, CalMac Ferries Ltd |
| 10:00 | DELIVERING LONDON'S FIRST FULLY ELECTRIC CO-PAX FERRY - LESSONS FOR DECARBONISING OUR MARITIME FUTURE Speakers: Tim Beckett, John Monasta and Matt Jennings, Beckett Rankine |
| 10:15 | DATA DRIVEN OPERATIONS IN MARITIME DECARBONISATION: ENABLER OF PROGRESS OR HIDDEN ENVIRONMENTAL BURDEN Speakers: Jack Howard and Rowan Wilkinson, BMT |
| 10:30 | SESSION Q&A |
| 10:45 | Refreshment break |

SESSION TWO: SUSTAINABLE TECHNOLOGIES AND INNOVATION

Chair: Sol Judah FIMarEST, Honorary Professor, University of Strathclyde

| 11:15 | OUTCOMES AND FINDINGS FROM THE IMO 'HYWINDSHIPS WORKSHOP Speaker: John Butler, Business Stream Director, Global Maritime |
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| 11:30 | ENVIRONMENTAL-ECONOMIC SUSTAINABILITY OF HYDROGEN AND AMMONIA FUELS FOR SHORT SEA SHIPPING OPERATIONS Speaker: Prof Gerasimos Theotokatos FIMarEST, University of Strathclyde |
| 11:45 | GREEN SHIPPING: TECHNOLOGICAL INNOVATION AND LEGAL RISKS Speaker: Pia Rebelo, Stephenson Harwood LLP |
| 12:00 | SESSION 0&A |
| 12:15 | Lunch |

SESSION THREE: LOW AND ZERO CARBON FUELS

Chair: Mark Sinclair MIMarEST, Technical Key Account Manager, Lloyds Register

| 13:15 | ALTERNATIVE FUELS SHORESIDE STORAGE VESSEL DESIGN Speaker: Dr Thomas Beard, BMT |
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| 13:30 | SUSTAINABILITY CHALLENGES: MARINE FUEL SUPPLIER PERSPECTIVE Speakers: Emily Kyle and Michael Atkinson, World Fuel Services |
| 13:45 | RETROFITTING FOR REALISM: ESTABLISHING DUAL-FUEL LNG AS A PRACTICAL DECARBONISATION STRATEGY Speakers: Arunanshu Jha and Ashutosh Awadhesh Singh, Indian Maritime University, Kolkata Campus |

SESSION THREE: LOW AND ZERO CARBON FUELS - CONTINUED

Chair: Mark Sinclair MIMarEST, Technical Key Account Manager, Lloyds Register

| 4:00 | Q&A |
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14:15 Refreshment break

SESSION FOUR: UK PORTS, INFRASTRUCTURE AND SUPPLY CHAINS

Chair: lain Anderson MIMarEST, Technical Specialist, Calmac Ferries

| 14:45 | UK MARITIME DECARBONISATION SUPPLY CHAIN – OPPORTUNITIES AND CHALLENGES Speaker: Nikki Ng, Technical Specialist, Lloyds Register |
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| 15:00 | WET STORAGE AT CONSTRUCTION PORTS FOR FLOATING OFFSHORE WIND TURBINES Speaker: Alan Crowle, University of Exeter |
| 15:15 | PORTS AS ENERGY HUBS: A CHANCE TO SUSTAIN ISLAND CONNECTIVITY? Speakers: Dr Thomas Beard and Tania Berry, BMT |
| 15:30 | PORT INFRASTRUCTURE AND SAFETY REQUIREMENTS FOR AMMONIA BUNKERING OF OCEAN-GOING VESSELS: A COMPARATIVE, ENHANCED, AND REPLICABLE FRAMEWORK Speaker: Mohammad Mirzaei, Liverpool John Moores University |
| 15:45 | ONSHORE POWER SUPPLY: IDEALISM OR FALLACY? Speakers: Tania Berry and Thomas Beard, BMT |
| 16:00 | Q&A |

SESSION FIVE: HUMAN ELEMENT AND SKILLS GAP

Chair: Dr Thomas Beard MIMarEST, Clean Shipping Service Lead, BMT

| 16:15 | A SYSTEMIC HUMAN FACTOR ANALYSIS FOR ENHANCED SAFETY IN MARITIME DECARBONISATION Speaker: Dwitya Waskito, University of Strathclyde |
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| 16:30 | GREEN SEAFARING INITIATIVE: CAPACITY BUILDING OF FILIPINO SEAFARERS IN A JUST TRANSITION TOWARDS A GREEN AND EFFICIENT MARITIME INDUSTRY Speaker: Mao Tze Bayotas, Maritime Academy of Asia and the Pacific |
| 16:45 | SYSTEMIC READINESS FOR MARITIME DECARBONIZATION: LEGAL MANDATES, EDUCATIONAL REFORM, AND HUMAN-CENTERED IMPLEMENTATION IN THE GULF Speakers: Ashraf Ragab, Tarek Abouelela, Ahmed Isamil and Serdar Yildiz, Sharjah Maritime Academy |
| 17:00 | HUMAN ELEMENT AND SKILLS GAP Speaker: Shaun White, Managing Director, Foreship UK |
| 17.15 | SESSION 0&A |
| 17:30 | CLOSING REMARKS Cdr Robert Prideaux, FIMarEST, CEng, CMarEng, Scottish Branch Chair |
| 17-7-5 | DDINKS DECEDTION |