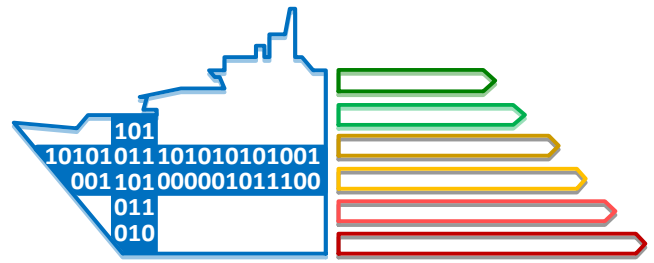


# INTENS

## Integrated

### Energy Solutions to

### Smart & Green Shipping



Time:	9:00 - 18:00, 16.09.2020
Place:	Forum Marinum, Linnankatu 72, Turku

- 08:30 – 09:00 *Coffee and registration*
- 09:00 – 09:10 *INTENS Overview, Zou Guangrong (VTT)*

#### **Novel solutions to digital shipping** (Jerker Björkqvist, Åbo Akademi)

- 09:10 – 09:30 *Data driven ship design for digitalized maritime industry, Mia Elg, Ossi Mettälä (Deltamarin)*
- 09:30 – 09:50 *Saving potential achievable with consistent use of route optimization, Kimmo Laaksonen, Pekka Pakkanen (NAPA)*
- 09:50 – 10:10 *Increasing ship energy efficiency using onboard data: Opportunities and challenges, Mikael Manngård, Wictor Lund, Jerker Björkqvist (Åbo Akademi) and Wilhelm Gustafsson, Farbod Raubeteau (Meyer Turku)*
- 10:10 – 10:50 *-----Coffee/Poster-----*

#### **Novel technologies for low-emission shipping** (Seppo Niemi, University of Vaasa)

- 10:50 – 11:10 *Catalytic methods for methane and NOx emission removal in lean conditions, Teuvo Maunula, Kauko Kallinen (Dinex Finland)*
- 11:10 – 11:30 *Regeneration of methane oxidation catalyst, Kati Lehtoranta (VTT)*
- 11:30 – 11:50 *Optimization framework for low emission engine technology selection and long-term operation, Antti Ritari, Kari Tammi (Aalto University)*
- 11:50 – 12:50 *-----Lunch/Poster-----*
- 12:50 – 13:40 **Tour de Museum** (visit to the national special nautical museum, and the Finnish Navy Museum)
- 13:40 – 14:20 *-----Coffee/Poster-----*

#### **Novel technologies for energy-efficient shipping** (Seppo Niemi, University of Vaasa)

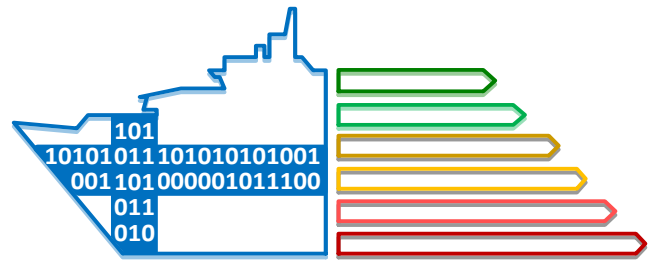
- 14:20 – 14:40 *Heat exchangers in ORC processes, Valtteri Haavisto, Kerttu Kupiainen (Vahterus)*
- 14:40 – 15:00 *Waste heat recovery - Dynamic modelling and simulation, Radheesh Dhanasegaran, Teemu Turunen-Saaresti (LUT University)*
- 15:00 – 15:20 *Ship hybridization - system configurations and their comparison, Paula Immonen (LUT University)*
- 15:20 – 15:40 *Digital-twinning the engine research platform in VEBIC, Saana Hautala, Emma Söderäng, Seppo Niemi (University of Vaasa)*
- 15:40 – 16:00 **Call for collaborative innovations in maritime digitalization**, Zou Guangrong (VTT)
- 16:00 – 18:00 *Networking party*

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#### Poster Sessions (during coffee and lunch breaks)

- |               |   |
|---------------|---|
| 10:10 – 10:50 | 1. <i>Hybrid Vessel Emulator Environment at LUT, Henri Montonen (LUT University)</i>  |
|               | 2. <i>Cost optimization approach to software controlled system redundancy, <u>Jani Alho</u> (LUT University)</i>  |
|               | 3. <i>Numerical simulation of dual-fuel spray ignition under RCCI conditions, <u>Bulut Tekgül</u> (Aalto University)</i>  |
| 11:50 – 14:20 | 4. <i>Catalytic oxidation of methane: Modelling and simulations in GT-Suite, <u>Kirsi Spooft-Tuomi</u>, Seppo Niemi (University of Vaasa)</i>   |
|               | 5. <i>Increasing ship energy efficiency using onboard data, <u>Mikael Manngård</u>, Wictor Lund, Jerker Björkqvist (Åbo Akademi) and Wilhelm Gustafsson, Farbod Raubetean (Meyer Turku)</i> |
|               | 6. <i>Data driven Smart Oil Filter, <u>Wictor Lund</u>, Jerker Björkqvist (Åbo Akademi), Jagan Gorle (Parker Hannifin), and Olof Calonius (Aalto University)</i>                            |
|               | 7. <i>Fault detection in marine systems using soft sensors, <u>Mikael Manngård</u>, Jerker Björkqvist (Åbo Akademi)</i>   |
|               | 8. <i>Data-enriched system fault diagnostics for real-time sensor fault compensation, <u>Hannu Rummukainen</u>, Antti Hynninen (VTT)</i>  |
|               | 9. <i>Cloud-based optimisation framework - new developments and case study, <u>Timo Korvola</u>, Jari Lappalainen (VTT)</i>   |