Institution of MECHANICAL ENGINEERS

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Technical Talk

Organised by

The Institution of Mechanical Engineers (IMechE) Singapore Branch

The Joint Branch of the RINA and the IMarEST (Singapore)

Newcastle University in Singapore

Predicting ship systems performance early in the design process using system simulation tools
by

Sophie Vellutini
Pre Sales Consultant, Siemens PLM

Date : **13ᵗʰ April 2018, Friday.**
Time : **6:30 pm to 7:00 pm Registration & Refreshment**
Talk begins at 7:00 p.m. and ends at 8.00p.m.

Venue: **Newcastle Research & Innovation Institute (NewRIIS)**
80 Jurong East Street 21 #05-04
Devan Nair Institute for Employment and Employability
Singapore 609607

To register your attendance, please click the web-link as follows,

https://www.eventbrite.sg/e/technical-talk-predicting-ship-systems-performance-early-in-the-design-process-tickets-44541974244

Abstract

Nowadays, the demand to optimize vessels' performance, bring down operating and maintenance costs, increase reliability and reduce gas emissions is driving major changes in the way we think of and design ships. New technologies and architectures are being investigated in order to address the aforementioned issues. For instance builders are starting to turn to electric and hybrid ships as an alternative, to integrate Waste Heat Recovery systems, or more commonly to reduce energy loss …

It is therefore critically important for a ship designer to understand the impact that the architectural choices will have on fuel economy, safety, emissions, thermal comfort, etc. He/she will have to answer the following questions: how to effectively integrate design choices in the earlier stages of the design chain? How to shorten time-to-market while integrating new technologies? How to drive innovation and create the ships of tomorrow?

In a collaborative-systems environment, a virtually-integrated ship model allows to check the impact of system-architecture choices at the system level and throughout the entire design process. It helps the designer to make decisions while accounting for the ship's energy balance, and that is very often linked to fuel consumption and vessel performances. Taking this system-level approach, which is enabled with physical-system modeling, will lead to smarter decisions, frontloading design issue, better choices, higher profit and superior products.

This talk discusses opportunities and challenges for system simulation in the Maritime, Oil & Gas and related industries and will provide some relevant examples on how system simulation can help frontload design issues.

About the speaker

Sophie Vellutini is working as a Pre Sales Consultant for Siemens Industry Software in Singapore, since November 2017. Her role focusses on the regional development and support of the system simulation software Simcenter Amesim. This role extends across all ASEAN countries and Australia – New Zealand, through different industries and in particular the Marine industry.

Sophie graduated in 2012 with an MSc in Mechanical Engineering and computer science from the ENSEIRB-MATMECA school of engineering in Bordeaux (France). She started her career as a CFD engineer for Principia working across multiple industries such as O&G, naval and industrial equipment. Then, she joined HydrOcean, part of Bureau Veritas Group, as a hydrodynamic and project engineer. In this role she moved to Singapore in 2015 and became a technical & sales engineer for HydrOcean supporting the business in South-East Asia.

About the venue

NewRIIS is strategically placed to develop Newcastle University's international research agenda, showcase innovation and facilitate collaboration with renowned research and industrial partners. NewRIIS delivers a range of events and activities including postgraduate and CPD training programmes, masterclasses and workshops on a variety of subjects, with focus on Engineering and Data Visualisation.

How to get to Devan Nair Institute for Employment and Employability at 80 Jurong East Street 21, Singapore 609607

Public Transport:

By Bus
Public Bus Services: 52, 105, 188, 333 & 502 (alight at IMM, 5 min walk to e2i)

By MRT Train
Alight at Jurong East MRT Station (NS1/EW24). Use Exit D to Westgate and follow the sign that leads to J-WALK. Walk straight and you will see the link bridge next to Paradise Dynasty (#02-13). Cross the link bridge and you will enter Ng Teng Fong General Hospital Tower A. Turn right and follow the sign that leads to Devan Nair Institute for Employment & Employability, e2i.

Parking @ e2i and nearby parking with covered link way to e2i:
e2i: $0.02/min | Motorcycles: $1.30/entry
JEM: 1st hr $1.30 | $0.30/15min subsequently | Motorcycles: 1.30/entry
IMM: 1st 2 hr free (weekdays only)| 3rd hr $1.07 | $0.30/15min subsequently | Motorcycles: $1.07/entry
Westgate: $1.30 for 1st hr | $0.50/15min subsequently | Motorcycles: $1.30/entry
Ng Teng Fong Hospital: $0.03/min | Motorcycles: $1.30/entry
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