

# Evening Technical Meeting: Real Subsea Accomplishments in Digital Technology

**\*\*NEW VENUE\*\***

Wednesday, 8<sup>th</sup> August 2018 ✦ Four Points by Sheraton (707 Wellington St Perth)

Onsite Registration 5.30 pm; Presentations 6.00 pm – 7.30 pm; Networking over drinks and finger food 7.30 pm – 8.30 pm

To register for the event visit [www.SUTETM08August2018.eventbrite.com.au](http://www.SUTETM08August2018.eventbrite.com.au)

Chaired by: Pawan Gupta, Principal Engineer - SURF & Pipelines, NobleSeas Engineering

## Early Insights: How Digital Engineering Made a Fast-Track Project Possible

**James Knipe, Lead Pipeline Engineer, Subsea Engineering Associates**

On a recent European gas transmission project, a small team from SEA applied their ICE (Intelligent Computation Engineering) Platform technology to deliver early insights, neutralise complexity and compress a detailed design schedule into just 14 weeks – delivering outcomes that ultimately enabled the highly constrained project to proceed. The ICE Platform is a suite of digital engineering tools that accelerate complex pipeline engineering tasks to deliver answers at scale, this adds confidence to early project decisions and helps projects stay ahead of change. Developed here in Perth, the ICE Platform is enabling projects globally and changing the way engineering is performed.

## Integrity Management of Flexible Risers using a “Digital Twin”

**Hema Wadhwa, Engineering Specialist, INTECSEA**

True assessment of the structural integrity of a flexible riser requires collection of reliable data relating to the operational condition of key structural elements, followed by rigorous assessment of data within an engineering model that fully captures the complexities of dynamic structural behaviour. This is achieved by using the FlexIQ™ process which integrates MEC-FIT™ technology for external scanning to detect corrosion features, cracking and wire misalignment in up to 3 layers of the tensile armour wires, and FLEXAS™ nonlinear dynamic solver that incorporates a global response model and detailed local finite element model enabling very efficient computation of the flexible’s wire stress time-histories as subject to irregular wave inputs. FlexIQ™ has enabled a step change in riser “Digital Twin” technology, now proven through successful application on two offloading risers offshore West Africa with a total inspection length of 2.5km.

## Free Spanning Pipelines in the Digital Age

**Nicholas Nielsen, Engineer, O&G Australia Operations, DNV GL - Oil & Gas**

DNVGL has developed a new tool for assessment of fatigue due to VIV and direct wave loading on pipelines. Fatfree Global can efficiently assess entire pipelines based on multiple surveys or operation conditions. Fatigue damage is calculated per KP location along the pipe, allowing for more accurate, and less conservative assessment of for pipelines with changing free span lengths and locations. This can significantly reduce or avoid costly intervention work for pipelines on shifting seabed.

## Cyber Security for an IoT World

**David De Lima, Consulting Systems Engineer – Security, Cisco Systems**

The Internet of Things provides extraordinary business benefits but also poses serious security risks. As billions of devices are connected to the internet and more and more processes get automated, the attack surface that cyber criminals can target and exploit is growing at an unprecedented rate. This presentation will provide an overview of the anatomy of a cyber-attack, how the technology industry is responding to protect critical infrastructure from these new threats, and what each of you can do within your organisations to help mitigate the impact of a cyber-attack.

*ETM programme is subject to change*

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*(correct at time of creating flyer)*

### REGISTRATION FEES:

Student/Individual/Corp Members \$30\*: Non-Members \$50: (additional \$5 if paying on night)  
5 Ticket Member Pass: \$125, 5 Ticket Non-Member Pass: \$225

**CPD = 1.5 hrs**

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SUT Evening Technical Meeting registrations are online. Payment during the registration process (via credit card or invoice) is required in order to secure your place. 5 Ticket Passes are for consecutive meetings. They can be transferred to a fellow Member or Non-Member if you cannot attend. Should you have any questions please contact the SUT on + 61 (0) 8 9446 9903 or email [perthadmin@sut.org](mailto:perthadmin@sut.org).