



Technical Talk

Co-Organised by

The Joint Branch of the RINA and IMarEST (Singapore)

The Society of Naval Architects and Marine Engineers Singapore

Singapore Maritime Academy

Waste Heat Recovery Technologies for Marine Applications by



Ng Chun Wee *MSc CEng MIMarEST MSNAMES*
PhD Student

Newcastle Research and Innovation Institute (NewRIIS)

Date : 22nd August 2019, Thursday.
Time : 6:30 pm to 7:00 pm Registration & Refreshment
The talk begins at 7:00 pm and ends at 8:30 pm
Venue: LT18A, Singapore Polytechnic
500 Dover Rd, 139651

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



<https://www.eventbrite.sg/e/waste-heat-recovery-technologies-for-marine-applications-tickets-67907877289>



Abstract

Only about 50% of the total energy available in the fuels onboard ships turn into useful power, either for propulsion or electricity generation, the rest is lost to the environment as waste heat. To meet IMO's ambitious initial strategy to reduce the greenhouse gas emissions from international shipping by at least 50% by 2050 compared to 2008 levels, several options are available, which include alternative fuels, energy efficiency measures and speed reduction. While the use of alternative fuels like LNG in marine engines had been widely discussed due also to tightening environmental regulations (e.g. IMO sulphur cap 2020), there is comparatively lesser coverage on energy efficiency measures, in particular, waste heat recovery technologies.

Waste heat recovery technologies involve the re-use of energy that would otherwise be wasted from marine power plants and could promote efficient use of energy, thereby reducing CO₂ emissions.

This talk will provide an overview of the key waste heat recovery technologies already available in the market as well as those under research and development. Examples of actual maritime applications will be highlighted to give a sense of technology maturity and economics.

About the Speaker

Ng Chun Wee is a PhD student under the supervision of Associate Professor Ivan Tam at Newcastle Research and Innovation Institute ([NewRIIS](#)) which is Newcastle University's new cutting-edge research facility in Singapore. His research interest covers energy efficiency and waste heat recovery onboard ships and how system modelling and simulation methods can be applied to enhance their performances further.

Chun Wee graduated with a BEng in Marine Engineering from Newcastle University 15 years ago, and now he is also working as a senior engineer in DNV GL Singapore responsible for plan approval of ships and offshore rigs. Chun Wee has since then obtained MSc in Maritime Studies and Offshore Technology from NTU and NUS respectively. He is a UK Chartered Engineer, and he is also an active member of the Institute of Marine Engineering Science and Technology (IMarEST).



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Location Map



SINGAPORE POLYTECHNIC | **SP** | 500 Dover Road, Singapore 139651 | www.sp.edu.sg |

Nearest MRT Station: Dover (Green Line).

Bus 14, 74, 105, 106, 147, 166, 185.

Closest Bus Stops in Commonwealth Ave W: Dover Stn.

See the map for the location of the car parks.

All members are welcome, and admission is free, but early registration is necessary.

No filming or walk-in guest is allowed for this event.

Dress code: business casual.

Photos taken by official photographers may be used by the organizers in their published material.