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NTU and SMI launch new S\$15 million research centre to develop sustainable energy and maritime solutions, with focus on shipping emissions

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More than 150 participants from the industry, academic and government agencies took part in the annual Singapore Maritime Institute (SMI) Forum today to share and discuss innovation in



the maritime sector. Themed "Establishing a Stronger Maritime Innovation Ecosystem", the seventh edition of the SMI Forum addressed the current landscape and future trends of research and technology for Maritime Singapore's long-term competitiveness.

NTU and SMI launch new S\$15 million research centre to develop sustainable energy and maritime solutions

Chairman of the Board and Governing Council of SMI Mr Wong Weng Sun announced the establishment of the new Maritime Energy and Sustainable Development (MESD) centre of excellence by Nanyang Technological University (NTU). Guest-of-Honour Senior Minister of State for Transport and Health Dr Lam Pin Min witnessed the signing of the agreement between NTU and SMI at the event.

To be operational by the end of this year, MESD will focus on future port and shipping applications in three key areas – energy management, emissions management, and sustainable maritime operations.

Professor Lam Khin Yong, NTU's Acting Provost, Chief of Staff and Vice President for Research, said, "Most international trade and key economic activities depend on the movement of goods that involve ships using heavy fuel oil and other fossil fuels. This partnership will see the development of greener solutions for the shipping industry so as to cut down emissions for a more sustainable maritime industry. It will also groom future maritime researchers who will continue to push the boundaries of innovation."

The new centre will be jointly funded by SMI up to S\$10 million, with NTU contributing S\$4 million, and another S\$1 million from NTU's industry partners.

MESD is the first maritime research centre of excellence supported by SMI as part of its efforts to deepen research capabilities while developing a long-term pool of quality maritime researchers in Singapore. Executive Director of SMI Mr Toh Ah Cheong said, "We are pleased to support the establishment of the MESD Centre of Excellence to further deepen NTU's capability and collaboration with the industry in maritime energy research."

Jurong Port inks collaboration with NTU to testbed energy solutions for 'Next Generation Multipurpose Port' under Living Lab programme

NTU further bolsters its research collaboration with the maritime industry by inking a five-year memorandum of understanding (MoU) with Jurong Port following the establishment of the MESD at the event witnessed by Guest-of-Honour Dr Lam.

NTU and Jurong Port will jointly pursue research and development in areas such as Smart Multi Energy Management Systems, Alternative Energy Source Applications and Environmental Monitoring Solutions.

"We are delighted with this partnership with NTU. It forms the inaugural component of Jurong Port's Living Lab programme to test bed solutions for our journey towards a 'Next Generation Multipurpose Port'", said Mr Ooi Boon Hoe, Chief Executive Officer, Jurong Port.

Other components of Jurong Port's Living Lab programme include collaboration with industry partners to develop and test solutions in areas such as Multipurpose Port Productivity, Internet of Things, Data and Visual Analytics, Safety and Security Enhancements.

"Jurong Port's Living Lab will join MPA as well as PSA Living Labs to help drive transformation of the maritime sector as part of the Sea Transport Industry Transformation Map. We look forward to collaborate on impactful research programmes as part of the MPA-JP MoU, that will leverage new technologies to ensure Maritime Singapore stays competitive as a world class port and international maritime centre", said Mr Andrew Tan, Chief Executive of the Maritime and Port Authority of Singapore (MPA).

MPA and Shell Shipping & Maritime sign MoU to advance clean fuel technology, remote/autonomous technology and digitalisation

In the same context to grow the maritime innovation ecosystem in Singapore, MPA and Shell Eastern Trading (Pte) Ltd. (Shell) have signed a MoU at the SMI Forum for co-operation to promote research and innovation in areas such as Clean Fuel Technology, Remote/Autonomous Technology and Digitalisation.

Under the MoU, MPA in partnership with Shell, will collaborate on the following key areas:

- a) Developing innovative solutions to reduce emissions in the port
- b) Explore greater use of automation in the port
- c) Support study and development of digitalisation efforts, including electronic data exchanges among various stakeholders, to enhance safety, efficiency and security of maritime communication.

The MoU was signed by Mr Nick Potter, General Manager Asia Pacific-Middle East, Shipping & Maritime of Shell, and Mr Andrew Tan, Chief Executive of MPA at the Forum. Witnessing the signing ceremony was Guest-of-Honour Dr Lam.

"Singapore will continue to invest in future capabilities to build up a strong maritime cluster to generate good employment opportunities and stay ahead of the competition. We are pleased to work with industry partners like Shell to drive the digital transformation of the maritime industry in Singapore in the areas of electronic data interchange, automation, intelligent systems and cleaner energy," said Mr Andrew Tan.

Top Projects of SMI Research Showcase – April 2017

With the intention to raise the profile and awareness of maritime and offshore R&D activities and to recognise and award research excellence, SMI announced the Top Projects under the 4th SMI Research Showcase that took place from 26 to 28 April 2017 during the Singapore Maritime Week 2017.

The Principal Investigator of each Top Project received their awards from Guest-of-Honour Dr Lam at the Forum.

NTU's Assistant Professor David Fan's research work applies quick remote inspection to develop accurate and reliable tomography algorithm for corrosion mapping of ship structures. This not only allow companies to enhance productivity but also enable accurate characterisation of corrosion damage from a remote and safe location.

Under the context of international emission regulatory developments, NTU's Professor Wang Xin collaborates with multiple industry partners to study the significance and impact of developing a total solution of exhaust gas cleaning system for dry cargo merchant vessels. The Top Projects were determined by a Judging Panel assessment (75% weightage) and voting

by visitors of the Research Showcase (25% weightage). Each of the top projects were awarded S\$3,000.

A Judging Panel was convened to assess shortlisted maritime and offshore research projects supported by SMI. Visitors of the three-day Research Showcase held in conjunction with the Singapore Maritime Week 2017 at Marina Bay Sands Singapore also voted for their favourite projects. The next edition of the SMI Research Showcase will be taking place in April 2018 during Singapore Maritime Week 2018.

Source: Singapore Maritime Institute