



KONGSBERG



FEMME 2015

17-19 November | **Singapore**

CONFERENCE BROCHURE
& EVENT PROGRAMME

FEMME 2015 | SINGAPORE

FOREWORD

Welcome to FEMME 2015

FEMME (Forum for Exchange of Mutual Multibeam Experience) is about sharing experiences, discussing ideas and building relationships, and we would like to thank you for coming to Singapore and contributing towards make this happen! For KONGSBERG this is a phenomenal opportunity to collaborate with industry experts as we are determined to understand your applications and aim to continuously improve our solutions to make you successful. We invest heavily in product development and will be increasing this investment even further in 2016. During the forum we will present new products and solutions, and you can trust that even more is coming.

During Workshop 2 we will share experiences on how to get small boat installations right the first time, this is a good example of the driving force behind FEMME, and also behind KONGSBERG as a whole. We want to make our systems easier to use; being better connected, more accurate and providing products and solutions that work the first time are key priorities for us - that is our way of living the KONGSBERG values of being Determined, Reliable, Collaborative and Innovative.

Please also notice that it is a Kongsberg value to have a good time! We wish you enjoyable and memorable moments with friends and colleagues during both the conference and social events!

Best wishes,



Bjørn Jalving, Executive Vice President
Kongsberg Maritime - Subsea Division

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A BRIEF HISTORY



FEMME 2015 - our 15th Forum for EM Mutual Experience

FEMME is Kongsberg Maritime's biennial forum designed for users of our multibeam echo sounder systems. The forum has grown over the years into a trusted and anticipated conference.

For 2015, our programme in Singapore offers a fantastic schedule of events. There are technical product and application presentations by world leaders in the hydrographic field as well as presentations from fellow multibeam users. You can also attend practical workshops and tutorials where you can get hands-on, network and share your technical experiences and insights with industry colleagues from all over the world.

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ROOMS AND LAYOUT

FEMME 2015 will take place in the fantastic function rooms located in the Hotel W Sentosa Cove. The conference will be held throughout the Great Room, the Great Room Foyer and Studios 1 - 3. More information on what is taking place in each space is detailed below.



Photos of W Sentosa Cove © Jonathan Phillips | jonathan.phillips@starwoodhotels.co



THE GREAT ROOM

The main presentations and plenary sessions will take place in the Great Room throughout the conference.



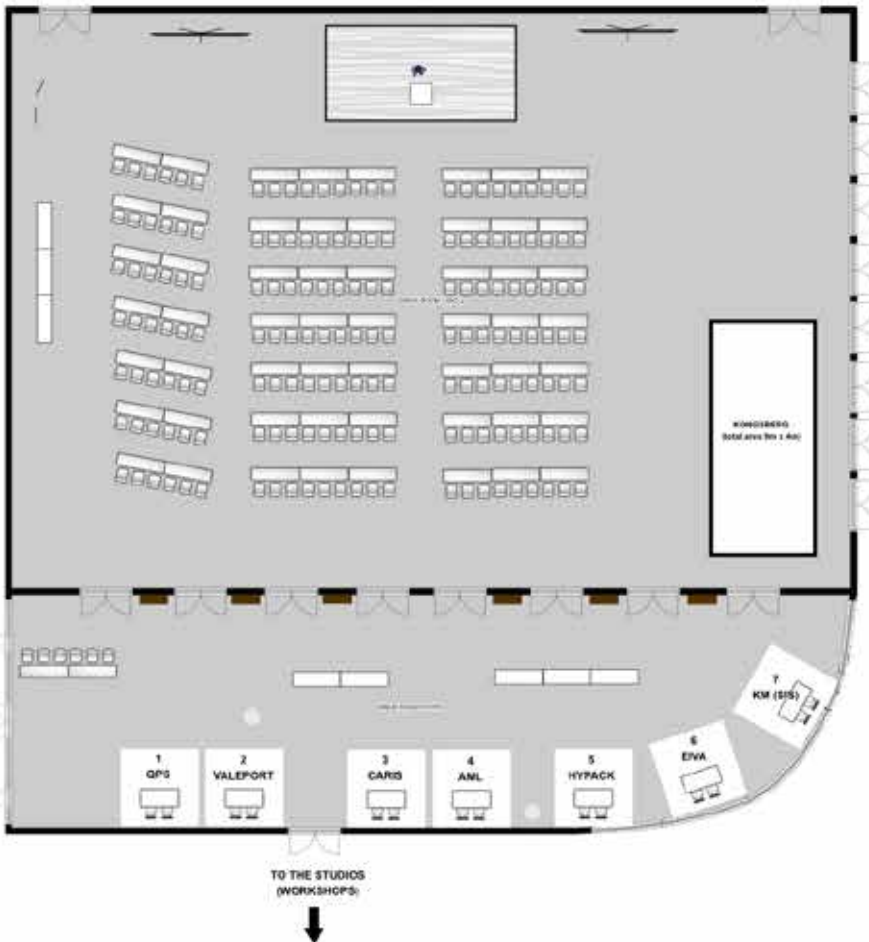
GREAT ROOM FOYER

Third Party Exhibitions and general networking will be taking place in the Great Room Foyer.



STUDIO 1 & 2

Workshops will take place on Tuesday morning, and will be repeated on Friday in Studio 1 & 2.



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THIRD PARTY EXHIBITORS

We are proud to be presenting our Third Party Exhibitors at FEMME 2015. Each exhibitor will have a stand located in the Great Room Foyer, and will be exhibiting all day throughout the conference.



AML

AML Oceanographic of British Columbia, Canada designs and manufactures SV profilers, CTDs, and more for ocean sensing markets. Data·Xchange™ brings Wi-Fi and GPS to X·Series profilers to streamline SVP data collection. Award-winning UV·Xchange™ and Cabled-UV biofouling control enhance in-situ CTD performance and prevent fouling on subsea equipment.

www.amloceanographic.com



Caris

For 35 years, CARIS™ software has been the number one choice of hydrographic offices. The trusted CARIS HIPS and SIPS™ software works seamlessly with the full range of Kongsberg sonars and provides direct integration into chart production and GIS workflows. Find out more about the CARIS Ping-to-Chart™ solution by visiting www.caris.com.

www.caris.com



Eiva Pte Ltd

EIVA is an engineering company with more than 35 years experience in the offshore construction and survey industry. We provide software, equipment, integrated system solutions, rental services, 24/7 support and software training to a wide range of segments, covering virtually any subsea task. Learn more at eiva.com.

www.eiva.com



Hypack

HYPACK - a Xylem brand, has been serving the marine and hydrographic community for over 25 years. With over 10,000 users worldwide, HYPACK has become a leading developer of hydrographic and dredging software in the industry. It provides the Surveyor with all the tools needed to design their survey, collect data, process it, reduce it, and generate final products.

www.hypack.com



Valeport UK

Valeport manufacture products for measurement of Sound Velocity, Tide and Bathymetry. We are pleased to introduce our latest development the SWiFT SVP. This new compact unit features Sound Velocity, Pressure, Temperature, Salinity & Density measurement, plus integral GPS, re-chargeable battery and LED status indications for GPS, battery and communications.

www.valeport.co.uk





Kongsberg Maritime will be represented at FEMME 2015 by our different business divisions and subsidiary companies.

Kongsberg Maritime

Kongsberg Maritime is a global marine technology company providing innovative and reliable solutions for the marine industry. Our subsea solutions include echo sounders, scanning sonars, marine robotics, acoustic positioning, acoustic telemetry, camera, lighting systems and fishery echo sounders. KONGSBERG delivers complete solutions, **maximising performance by providing THE FULL PICTURE.**

www.km.kongsberg.com

Kongsberg Defence Systems (KDS)

Kongsberg Defence Systems is Norway's premier supplier of defence and aerospace-related systems. Our portfolio comprises products and systems for command and control, weapons guidance and surveillance, communications solutions and missiles. Kongsberg Defence Systems also makes advanced composites and engineering products for the aircraft and helicopter market.

www.kongsberg.com/kds

Kongsberg GeoAcoustics

Kongsberg GeoAcoustics is a wholly owned subsidiary of Kongsberg Maritime. We are a leading manufacturer of sonar seabed survey equipment, including shallow water multibeam systems, side scan sonars and sub-bottom profilers. Our customers include leading commercial survey companies, navies and marine research establishments in over 60 countries around the world.

www.km.kongsberg.com/geoacoustics

Kongsberg Seatex

We are a leading international marine electronics manufacturer specializing in the development and production of precision positioning and motion sensing systems. Our commitment is to provide quality products and solutions for safe navigation and operations at sea in the commercial offshore, maritime, hydrographics and defence industries.

www.km.kongsberg.com/seatex

Kongsberg Mesotech

Kongsberg Mesotech Ltd, the Canadian subsidiary of Kongsberg Maritime, is a global leader in the underwater acoustic industry. With over 40 years of innovative sonar experience, the Company designs and manufactures acoustic instrumentation with superior image resolution. Mesotech supplies a worldwide customer base with sonar for search and recovery, marine engineering, security and surveillance, fisheries and scientific applications.

www.km.kongsberg.com/mesotech

Hydroid

Hydroid is a wholly owned subsidiary of Kongsberg Maritime. Hydroid is a leading manufacturer of advanced, innovative Autonomous Underwater Vehicles - AUV for deep sea survey and mapping worldwide. Applications include both military and commercial use.

www.km.kongsberg.com/hydroid



Note: The papers and speakers are subject to change at short notice

TIME	GREAT ROOM	GREAT ROOM FOYER
	TUTORIALS (PRODUCT UPDATES AND APPLICATIONS)	EXHIBITIONS
10:00	PAPER 1 - Geoswath Plus (10:00 - 10:30) Speaker: Dr Martin Gutowski, Technical Product Sales Manager	THIRD PARTY EXHIBITIONS (Ongoing throughout the conference)
10:30	PAPER 2 - GeoPulse 3D Sub Bottom Profiler (10:30 - 11:00) Speaker: Dr Martin Gutowski, Technical Product Sales Manager	
11:00	PAPER 3 - PuISAR Sidescan Sonar (11:00 - 11:30) Speaker: Dr Martin Gutowski, Technical Product Sales Manager	
11:30	PAPER 4 - EA Single Beam (11:30 - 12:00) Speaker: Jan Ove Bakke, Product Manager Singlebeam Echo Sounders	
12:00	LIGHT MEAL (60 minutes)	
12:30		
13:00	PAPER 5 - EM 2040 and EM 2040C (13:00 - 14:00) Speaker: Kjell Echholt Nilsen, Senior Engineer R&D	
13:30		
14:00	PAPER 6 - EM 710 MkII (14:00 - 15:00) Speaker: Berit Horvei, Product Manager Multibeam Echo Sounders	
14:30		
15:00	COFFEE BREAK (30 minutes)	
15:30	PAPER 7 - EM 122 and EM 302 (15:30 - 16:00) Speaker: Berit Horvei, Product Manager Multibeam Echo Sounders	
16:00	PAPER 8 - SBP 120 and 300 Sub-Bottom Profilers (16:00 - 16:30) Speaker: Bjørnar Langli, Senior Engineer R&D	
16:30	PAPER 9 - TOPAS PS 18, 40 and 120 Sub-Bottom Profilers (16:30 - 17:00) Speaker: Johnny Dybedal, Product Manager Sub-Bottom Profilers	

TUTORIALS - PRODUCT UPDATES AND APPLICATIONS (10:00 - 17:00)
 Moderator: Sverre Teile, Vice President Underwater Mapping

NOTE: Registration will be available throughout the day from 7:30am



EVENING AND SOCIAL EVENTS

ICE BREAKER RECEPTION (19:00 - 22:00)

Meeting point: W. Sentosa Hotel Lobby,

The evening will consist of dinner and cocktails at The Cove Stadium, a short 50m walk from the hotel W.

Dress code: Business casual



WORKSHOPS

Workshops will be running throughout the morning as detailed on page 9.

The workshops will be repeated on Friday morning.



TIME	GREAT ROOM	GREAT ROOM FOYER
	PLENARY SESSIONS	EXHIBITIONS
09:00	Conference opening By Bjørn Jalving, Executive Vice President, Kongsberg Maritime - Subsea Opening address: By Mr Jamie Chen, Deputy Chief Hydrographer - Maritime and Port Authority of Singapore (MPA)	THIRD PARTY EXHIBITIONS (Ongoing throughout the conference)
09:30	PAPER 1 - Multibeam as a Tool for Quay Wall Construction (09:30 - 09:55) Speaker: Alex Steffen, Head of Survey Department - Jan De Nul Group	
10:00	PAPER 2 - Shallow Water Multibeam Replacement: EM 2040C Results - the Bright Side and the Dark Side (09:55 - 10:20) Speaker: Christophe Vrignaud, Ingénieur Ministère Défense - SHOM	
10:30	PAPER 3 - Mapping Uncharted Fjords of the High Arctic from a Small Vessel (10:20 - 10:45) Speaker: Riko Noormets, Associate Professor Marine Geology - University Centre in Svalbard (UCIS)	
11:00	COFFEE BREAK (20 minutes)	
11:30	PAPER 4 - Experiences with EM 2040C and KM SIS in remote sub-Antarctic operations (11:05 - 11:30) Speaker: Dave Field, Operations Director - IXSurvey Australia Pty Ltd	
12:00	PAPER 5 - Operational Capabilities of a Launch-Mounted EM 2040D RX: Ultra Wide-Swath Seabed and Target Tracking in an Unstable Sound Speed Environment (11:30 - 11:55) Speaker: John. E. Hughes Clarke, Centre for Coastal and Ocean Mapping, UNH	
12:30	PAPER 6 - Survey Vessel for Extremely Shallow Waters (11:55 - 12:20) Speaker: Robert Knap, Head of GIS Department - VARS BRNO a.s	
13:00	LUNCH (60 minutes)	
13:30	PAPER 7 - Hydrographic Collaboration Between Spanish Hydrographic Institute (IHM) and Portugese Hydrographic Institute (IHPT) (12:20 - 12:45) Speakers: CF (IH) Juan R Conforto and CC (IH) Gustavo Gómez-Pimpollo	
14:00	PAPER 8 - GeoChirp 3D - A True 3D Sub-Bottom Profiler (13:45 - 14:10) Speaker: Professor Jonathan Bull, School of Ocean and Earth Science, National Oceanography Centre (NOC)	
14:30	PAPER 9 - Natural Hydrocarbon Seeps in Offshore Frontier Basins; Observations and Inferences regarding Sub-surface Plumbing (14:10 - 14:35) Speaker: Philip A. Teas, Director - Oro Negro Exploration LLC (ONE)	
15:00	PAPER 10 - (1) Increasing Multibeam Resolvability through Over Sampling. (2) Using Difference Grids to Improve Quality of Multibeam Calibration (14:35 - 15:05) Speaker: Daniel L. Orange, Operations Manager, Offshore - Oro Negro Exploration LLC (ONE)	
15:30	PHOTO SESSION (30 minutes)	
15:50	COFFEE BREAK (20 minutes)	
16:00	PAPER 11 - Multispectral Acoustic Backscatter from Multibeam: Improved Classification Potential (15:50 - 16:15) Speaker: John. E. Hughes Clarke, Centre for Coastal and Ocean Mapping, UNH	
16:30	PAPER 12 - Geohab Backscatter Working Group (16:15 - 16:40) Speaker: Glen Rice, NOAA Corps commissioned officer LTJG	
17:00	PAPER 13 - A Fleet-Wide Approach to Optimizing Data Quality (16:40 - 17:05) Speaker: Vicki Ferrini, Research Scientist LDEO - Columbia University	
17:30	PAPER 14 - The Search for MH-370 (17:05 - 17:30) Speaker: Paul Kennedy, Operations Manager - Fugro Survey Australia	
	SESSION CLOSING	

TIME	GREAT ROOM	GREAT ROOM FOYER
	PLENARY SESSIONS	EXHIBITIONS
08:30	SESSION 5 Simone Di Giacomo PAPER 15 - Australia's RV Investigator: Supporting Science with an Acoustically Quiet Vessel (08:30 - 08:55) Speaker: Dr Tara Martin, Senior Research Scientist - CSIRO Oceans and Atmosphere Flagship	THIRD PARTY EXHIBITIONS (Ongoing throughout the conference)
09:00	PAPER 16 - Multibeam Sonar in an Ecologists Toolbox (08:55 - 09:20) Speaker: Daniel Ierodiaconou, Senior Lecturer at Deakin University, Australia	
09:30	PAPER 17 - Using Difference Grid (Grid Based Calibration) to Improve the Quality of Multibeam Calibration (09:20 - 09:45) Speaker: Daniel L. 'DanO' Orange, Operations Manager, Offshore - Oro Negro Exploration LLC (ONE)	
10:00	PAPER 18 - Better Offshore Surveys through Better Shipyard Survey Reports (09:45 - 10:10) Speaker: Kevin Jerram, Research Scientist - University of New Hampshire, Centre for Coastal and Ocean Mapping	
10:30	COFFEE BREAK (25 minutes)	
11:00	SESSION 6 Che Keong Lee PAPER 19 - Hydrographic and Geophysical Upgrade of the Irish National Research Vessels, R.V Celtic Voyager and Celtic Explorer (10:35 - 11:00) Speaker: Dr Fabio Sacchetti, Hydrographic Team Leader - Marine Institute of Ireland	
11:30	PAPER 20 - Quiet Vessels = Better Sonar Performance; A Lesson Learned. Documentation of Existing Noise on Oceanographic Ships (11:00 - 11:25) Speaker: Tim Gates, ManTech	
12:00	PAPER 21 - 25 years of experience with Kongsberg Maritime (11:25 - 11:50) Speaker: Henri Floc'h, Chef de service, Vessel and Scientific Equipment - IFREMER	
12:30	PAPER 22 - The Progressive improvement of Multibeam Data Acquisition and Processing: Lessons that could be Learned by Brazilian Civilian Hydrographic Companies (11:50 - 12:15) Speaker: LtCmd. Adriano Vieira de Souza, DHN Brazil	
13:00	LUNCH (60 minutes)	
13:30	SESSION 7 Helge Uhlen PAPER 23 - Custom processing with SIS QA (13:15 - 13:40) Speaker: Christian Ugelstad, Norwegian Defence Research Establishment	
14:00	PAPER 24 - Re-examining Processing Efficiency using QPS Qimera with SIS QA inside - a Case Example from Refuge Cove, Victoria (13:40 - 14:05) Speaker: Douglas Bergersen, Director - Acoustic Imaging Pty	
14:30	PAPER 25 - Multibeam Advisory Committee (MAC) Pursuing Consistent Acquisition of High Quality Multibeam Echo Sounder Data Across the U.S. Academic Fleet (14:05 - 14:25) Speaker: Paul Johnson, Center for Coastal and Ocean Mapping - University of New Hampshire	
15:00	SESSION 8 Grant Rawlinson PAPER 26 - EM 2040 subsea surveying (15:05 - 15:25) Speaker: Craig Wallace, Subsea Engineer - Kongsberg Maritime	
15:30	PAPER 27 - Challenges when using multibeam on AUV and ROV (14:45 - 15:05) Speaker: Len Ricketts, DOF Subsea Norway	
16:00	PAPER 28 - ROV Based Survey: Groundbreaking New Technology (15:25 - 15:45) Speaker: Ola Oskarsson, CEO - MMT	
	Closing (15:45 - 16:00) By Bjorn Jalving, Executive Vice President, Kongsberg Maritime - Subsea	



EVENING AND SOCIAL EVENTS

GALA DINNER AND COCKTAILS

Meeting point: W Sentosa Hotel Ballroom
 18:00 - 19:00 - Pre-dinner cocktails
 19:00 - late - Gala dinner and entertainment
 Dress code: Business casual



FEMME 2015 | SINGAPORE

WORKSHOPS

The workshops will be running parallel to the conference in Studio 1 and 2. They are taking place throughout the morning on Tuesday 17 November and will be repeated during the morning of Friday 20 November for those who didn't get a chance to attend the first time around.

STUDIO 1



WORKSHOP 1

Best practices using KONGSBERG Multibeam systems

This workshop will focus on how to use Seafloor Information System (SIS) efficiently, and will demonstrate some key features that make it easier to achieve good results. SIS has built-in tools that should make it easy to see the quality of the survey in real time. Features include:

- Adding markers in real time
- Plan lines
- Data inspection
- Extra detections
- Calibration

A first look at the next generation of SIS will also be demonstrated.



Led by: **Terje Haga Pedersen**
Product Manager, Underwater Mapping

Tuesday 17th and Friday 20th 09:00 am 1 hour 25 min

STUDIO 2



WORKSHOP 2

Small boat installations: Getting it right the first time

This workshop will focus on multi beam echo sounder installations on small boats for shallow water operations.

We will share experiences and insights into different installation methods and solutions, including examples of both successful and disastrous cases.



Led by: **Frank Solberg Wilhelmsen** Group Manager, Customer Support (UMAP)



Bjørn Høyum Larsen
Senior Project Manager

Tuesday 17th and Friday 20th 09:00 am 1 hour 25 min

WORKSHOP 3

Efficient post-processing using SIS QA

SIS QA is the next generation tool for verifying the quality of the data acquired by Kongsberg Maritime Multibeam Echo Sounders.

This workshop will focus on how to use SIS QA, including features such as:

- Data verification
- Improvement with external sensors
- Statistics
- Depth processing and much more!

There will be hands-on demonstrations of features and possibilities that are useful in real world work.



Led by: **Dainius Figoras**
Senior R&D Software Engineer

Tuesday 17th and Friday 20th 10:35 am 1 hour 25 min

WORKSHOP 4

The M3 Sonar and IHO S-44; Operating tips for a successful shallow survey.

This workshop will present the operational experiences from recent hydrographic survey operations collecting data in and around Plymouth Sound using the M3 sonar for the common dataset collection for Shallow Survey 2015 which included a target detection task over known set features. Earlier in the year, field data collected was used to assess the compliance of that data with IHO standards and more recent installations have resulted in addressing key points that could provide for better success when collecting bathymetry with the M3 multibeam sonar.



Led by: **Aziah North**, Marine Engineering & Site Inspection Product Sales Manager

Tuesday 17th and Friday 20th 10:35 am 1 hour 25 min



FEMME 2015 | SINGAPORE

SOCIAL PROGRAMME

As well as papers, presentations and exhibitions there will also be time during FEMME for socialising, networking and enjoying food, drink and entertainment. Get to know your industry colleagues at Tuesday's Icebreaker Event, then relax and discuss the conference at the spectacular Gala Dinner on Thursday.

ICEBREAKER EVENT

The icebreaker event will be held at Cove Stadium Bar and Bistro

Tuesday 17 November (19:00 - 22:00)



Date and time: Tuesday 17 November, 18:45pm - late | **Meeting point:** W Sentosa Hotel lobby | **Dress code:** Business casual



We will be meeting at the hotel lobby at 18:45pm, and then we'll take a short, 50m walk to Cove Stadium at the quayside where you will experience the beautiful vibrancy of the Singaporean evening. It is also possible to arrive late if you are not getting to Sentosa until later.

You will have the opportunity to network and get to know the other FEMME guests in a relaxed environment, as well as dine on exquisite bistro food. This promises to be the perfect end to the first day of the conference.

GALA DINNER

The Gala Dinner will be held at the W. Sentosa Hotel Ballroom

Thursday 19 November

Pre-dinner cocktails (18:00 - 19:00) | Gala dinner and evening entertainment (19:00 onwards)



Date and time: Thursday 17 November, 18:00pm - late | **Meeting point:** W Sentosa Hotel lobby | **Dress code:** Formal dress



We have a fantastic and memorable evening planned to end FEMME 2015 on a real high note.

First we will meet in the Hotel Ballroom at 18:00 for pre-dinner cocktails, then at 19:00 the Gala dinner will begin. A delicious Singaporean style menu has been prepared, with full vegetarian options available.

During the course of the evening we have arranged for you to be entertained by 3 separate acts - wait and see what we have in store!



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USEFUL INFORMATION

We have put together some useful information and practical tips for your stay in Singapore during FEMME 2015. We want you to enjoy the conference and be as relaxed as possible, giving you time to focus on the presentations and networking.

Getting to the venue and/or accommodation from Changi Airport

Please take a taxi from Changi airport to the W. Sentosa Hotel (conference hotel) or the Bay Hotel. Taxis are plentiful, the travel distance is approximately 28.0 km/17.4 miles and an approximate rate is SGD 33. Travel time: 22 minutes

Hotel names and contact details

W. Sentosa Hotel Singapore - Sentosa Cove (Conference Hotel)

21 Ocean Way
Singapore 098374
Ph: +65 6808 7288

Bay Hotel Singapore

50 Telok Blangah Rd
Singapore 098828
Ph: +65 6818 6666

Cash or card for taxis

All taxis accept cash payments in Singapore dollars. Most taxis will accept credit card payments, although it pays to check with your taxi driver before you begin the journey.

HSE in focus: In case of any emergency

In case of emergency please contact Mr Grant Rawlinson (Regional Sales Manager, Kongsberg Maritime Singapore), Mobile +65 92329885 email: grant.rawlinson@kongsberg.com

Weather- what to expect

Singapore is located only 1 degree North of the Equator and enjoys a tropical climate, with hot humid weather. In November you can expect average temperatures of 26 -33 degrees Celcius daily, with a 50% chance of tropical thunderstorms.

Dress code for the Conference and social events

Business casual for all events, apart from the Gala dinner on Thursday 19 November which is formal dress

What to do, enjoy & see in Singapore (if time permits)

Singapore has many sites and attractions which can be found at: <http://www.yoursingapore.com/>
One experience not to be missed is dining at the local street markets such as Lau Pa Sat or Newton Circus. Ask your concierge for directions!

Gentle reminder

Singapore has zero tolerance for drug trafficking offences and practises capital punishment. Singapore also has strict laws against littering, chewing gum and other public nuisance misdemeanors.



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