The ship of the future

*How and with whom will the ship of the near future communicate?*

How will ships in the near future be equipped for communication and data collection and -exchange? And what are the consequences for ship and port operations and for investments? Those are the questions that the industry, IMO and university and research projects will seek to answer in the 2019 edition of the EHMC seminar. The day will include live demonstrations of industry products.

Our host port is the Port of Gothenburg, not only Sweden’s, but moreover Scandinavia’s most important gateway for goods, cruise and passengers. On the Friday we offer a visit by boat within the city of Gothenburg that will also take us around the harbour area.

We are looking forward to seeing each and all of you at our 2019 edition.

Registration; [http://www.harbourmaster.org/events](http://www.harbourmaster.org/events)
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>08.30</td>
<td>Registration</td>
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| 09.00-09.20 | Word of welcome by the Port of Gothenburg  
Opening by EHMC Chairman Capt. Amaury de Maupeou |
| 09.20-09.45 | Antonio Di Lieto, Carnival CSMART  
Port data in ENC’s for port passage planning |
| 09.45-10.10 | Amund Gjersøe, Kongsberg Norcontrol  
Manned and un-manned sailing together in the port |
| 10.10-10.25 | Q&A session                                             |
| 10.25-11.00 | Coffee Break                                           |
| 11.00-11.25 | Michael Baldauf, World Maritime University, Hochschule Wismar  
Will the future of shipping be based ashore? |
| 11.25-11.50 | Diego de la Calle, Inmarsat  
Satellite connectivity and IoT solutions for ship and shore digitalization |
| 11.50-12.00 | Allan Gray, IHMA president  
A sneak preview of the IHMA Congress 2020, Tasmania |
| 12.00-12.15 | Q&A session                                             |
| 12.15-13.00 | Lunch                                                   |
| 13.00-13.20 | Astrid Dispert, IMO  
Just in Time arrival in ports |
| 13.20-13.40 | Ben van Scherpenzeel, IHMA Project Officer Nautical Port Information  
Step by step port data development |
| 13.40-14.00 | Johan Hartler, Chalmers University of Technology  
Education and competences in future nautical professions |
| 14.00-14.15 | Q&A session                                             |
| 14.15-14.45 | Coffee Break                                           |

**Venue:** Comfort Hotel, Skeppsbroplatsen 1

**Boat trip and dinner** on the M/S Gothenburg. Boarding adres: Stenpiren, opposite the hotel

**Technical visit** on board the MS Hammen. Embarkation opposite the Comfort Hotel

**Registration:** www.harbourmaster.org (events page), Participation fee; € 135
The afternoon will have a number of ‘carousel presentations’; interactive demonstrations to small groups of people of (future) industry products and developments, services and visions;

<table>
<thead>
<tr>
<th>15.00 – 17.00</th>
<th>Carousel</th>
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<tbody>
<tr>
<td>Svitzer</td>
<td>Remote controlled tugs</td>
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<tr>
<td>Daniel Johannesson</td>
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<tr>
<td>STM; Sea Traffic Management</td>
<td>Demonstration of the end-results of the STM EU project, such as the sharing of voyage plans on 300 vessels</td>
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<td>Carnival</td>
<td>Port risk assessments for ports; does the risk perception of the cruise industry match with the risk profile that you have in mind for your port?</td>
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<tr>
<td>Antonio di Lieto</td>
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<tr>
<td>Port of Rotterdam</td>
<td>The digital port: digital tools to help harbour masters to optimize their port call.</td>
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<tr>
<td>Jan Gardeitchik</td>
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<tr>
<td>ChartCo, Tony Brown, Per Osterberg</td>
<td>Navigation and compliance solutions, on board and ashore, to support ships to comply with legislation in ports</td>
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<tr>
<td>UKHO</td>
<td>‘The last nautical mile’: UKHO’s new Marine Data Portal and AVCS online, bringing ship based information ashore</td>
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<tr>
<td>Jonathan Lewis</td>
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<td>Damen Shipyards</td>
<td>Operational data enriched with design, weather and maintenance data will be transferred via the EuroYards platform from vessel to shore, supplier to yard and from yard to client</td>
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<td>Siebe Rooijakkers</td>
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Evening program

19.00 – 22.00 Dinner

19.00 Embarkation on the M/S Göteborg, boat tour and dinner on board
Boarding address; Stenpiren, opposite the Comfort Hotel

22.00 Disembarkation

Friday 28 June 2019

Boat tour – on the M/S Hamnen – in the city and the Port of Gothenburg

09.00 Technical visit

09.00 Embarkation on the M/S Hamnen, opposite the Comfort Hotel

09.10 Departure
Coffee and snacks, sponsored by the Port of Gothenburg

11.30 Arrival at quay side

11.30 End of program
**Speakers**

**Antonio Di Lieto**  
Manager Special Projects - Carnival CSMART

**Port data in ENC's for port passage planning**

The ENC is no longer 'only' used for safe navigation. Port passage plans become ever more important with ENC’s becoming ever more detailed and powerful. This has implications of course for the conduct of vessels in port waters, but also for critical information such as information related to berths and soundings, for bridge resource management and for safety due diligence. Antonio Di Lieto will take us into the world of present and future port passage planning.

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**Amund Gjersøe**  
Manager Surveillance Systems - Kongsberg Norcontrol AS

**Manned and un-manned sailing together in the port**

The digitization of communication between ship and shore can potentially relief mariners and VTS operators of communicating over VHF, but is that the future? Through multiple research projects within the realm of e-Navigation Kongsberg Norcontrol has gained significant experience and knowledge and shares their thoughts about communication between ship and shore in a not-to-distant future where manned and un-manned ships are sailing in the same waters.

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**Michael Baldauf**  
Head of VTS-Simulation - Hochschule Wismar - World Maritime University

**Will the future of shipping be based ashore?**

Information and data exchange between two or more ships as well as between ships and all kinds of shore-based organizations and services has grown into a new dimension. These rapid fundamental changes affect the basic concepts of operating ships and even change traditional paradigms of controlling ships.

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**Diego de la Calle**  
Director Strategic Business Development - Inmarsat

**Satellite connectivity and IoT solutions for ship and shore digitalization**

If we want to manage port congestion, sea traffic, efficient port calls, the digital ship, the autonomous ship, the smart container, internet for crews and passengers etc. etc. is this really feasible with the existing connectivity infrastructure? Understanding the satellite communications sector business model is understanding how and when satellite communication will become reliable, affordable, mainstream and a support to far-reaching digitization.
Astrid Dispert  
Technical Adviser GloMEEP Project - IMO

**IMO guidance; event data exchange**

**Just in Time arrival in ports**
IMO’s Global Industry Alliance (GIA) is investigating shipping’s CO2 reduction potential, amongst others through the Just in Time (JIT) arrival in ports. JIT is all about adjusting a ship’s operating speed to only arrive at the port when the fairway, berth and nautical services are available. But what are the barriers to implement JIT? The IMO-GIA is developing a practical guide to support the implementation of JIT in ports.

Ben van Scherpenzeel  
Director Nautical developments, policies and plans - Port of Rotterdam & IHMA Project Officer
Nautical Port Information

**IHO guidance; master data exchange**

**Step by step port data development**
All above initiatives depend on easy and affordable exchange of data, which in turn depends on a high degree of standardization. The IHMA has always been a forerunner in this standardization. Both IMO and IHO are now in the process of developing guidance for ports in the implementation of these standards via a step by step approach.

Johan Hartler  
Head of Master Mariner education - Chalmers University

**Education and competences**

**Education and competences in future nautical professions**
How does a leading university in research and education in the maritime sector prepare for the future? Chalmers University, with 12,000 students, bases its’ strategic questions related to their seafarers’ curriculum on two distinct scenario’s; the unmanned ship scenario and the unmanned bridge scenario. In both scenarios we will see a shift to operations through remote control centers, hence an effect as well on shore based professions.

Allan Gray  
IHMA president

**A sneak preview of the IHMA Congress 2020, Tasmania**
The IHMA is having its 12th Congress in Hobard, Australia on the 23-26 March 2020, addressing the theme ‘The Next Wave – Navigating Towards the Digital Future’. What will be on offer at the IHMA Congress 2020 in Tasmania?
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