

e-Navigation: Opening the Door to the Future

Emerging technologies and their impact in the maritime industry

To examine future requirements, the conference will focus on a spectrum of likely developments, from those on the calendar for 2019 to ones perhaps 20+ years in the future. The range of possible topics is illustrated by S-Mode at one end, scheduled for decision next year, to those like "[Advanced Autonomous Waterborne Applications \(AAWA\)](#)". The number of topics between those extremes will require careful culling to develop a cohesive program. The presentations lead to a panel discussion by selected experts tasked with identifying the core competencies which in their view will be needed to support the advances they advocate. Conclusions and recommendations generated by the delegates will provide useful input to regulators, educators and maritime training establishments. These, submitted as part of the Conference Final Report to IALA, will be disseminated by IALA to the appropriate international and national authorities for consideration.

PRELIMINARY PROGRAM

5 NOVEMBER – DAY I

ICE BREAKER RECEPTION: 1700-1900, Courtyard Vallejo Napa Valley Hotel

Beverages and finger food together with the opportunity to meet with other participants and register.
(Transportation will be provided to and from the conference hotel)

6 NOVEMBER – DAY II

(Transportation will be provided to and from the conference hotel)

0730-0830: Registration and Continental Breakfast

Welcoming Remarks: Dr. Michael Holden, Conference Chair, and Rear Admiral Thomas A. Cropper, President, California State University Maritime Academy.

Keynote Address: Mr. Francis Zachariae, Secretary-General of IALA

SESSION I - Lines of Position – Building Blocks for the Future

The 'building blocks' contribute to the future operating environment, affecting present and future competency and training needs.

Moderator: Captain Tamara Burbach, California State University Maritime Academy

The Maritime Connectivity Platform (MCP): The MCP is a fundamental element for future development.

Presenter: Mr. Thomas Christiansen, SMART-Navigation Program consultant

Sea Traffic Management (STM) and VDES: The Sea Traffic Management (STM) Project defined a set of systems and procedures to guide and monitor sea traffic.

Presenter: Mr. Peter Bergljung, SAAB Transponder Tech

e-Navigation Maritime Services for non-SOLAS ships: The measures being developed by the Republic of Korea's *SMART-Navigation Program* offer the potential for significant impact on non-SOLAS vessels.

Presenter: Mr. Thomas Christiansen, SMART-Navigation Program consultant

LUNCH: 1200-1330, Lunch Address by Capt. John Betz, Los Angeles Pilot
Emerging Technology in Maritime Piloting

SESSION II: GOVERNMENTAL ACTIONS AND PLANS

Moderator: Ms. Helen Brohl, Executive Director, Committee on the Marine Transportation System (CMTS), U.S. Department of Transportation

The Future of Federal Navigation Services: USCG, USACE, and NOAA will present on collaborate initiatives to enhance the quality and presentation of federal navigation services.

Presenters: Mr. Brian Tetreault, U.S. Army Corps of Engineers, Mr. David Lewald, U.S. Coast Guard, Dr. Neil D. Weston, Technical Director, OCS, National Ocean Service, NOAA

Cyber Risk Management: Incorporation of cyber risk management into regulated facilities and the overall marine transportation system.

Presenter: LCDR Brandon M. Link, USCG, U.S. Coast Guard Office of Port and Facility Compliance

The Critical Role of Integrating new Technology within the Regulatory Process: Discussion of the importance of regulations and standards as advanced systems are implemented.

Presenter: Ms. Mayte Medina, chief, U.S. Coast Guard Office of Merchant Marine Credentialing

DINNER: 1800-2000, On Campus
Speaker Capt. Samuel Pecota,
Transportation will be provided to and from the conference hotel

7 NOVEMBER – DAY III

(Transportation will be provided to and from the conference hotel)

0730-0830: Continental Breakfast

SESSION III: Toward the Horizon

Moderator: Captain Samuel R. Pecota, California State University Maritime Academy

Smart Marine Ecosystem Strategy: The Smart Marine Ecosystem Strategy addresses an array of developments dealing with cooperative decision making, applications of augmented reality, decision support and similar systems.

- Presenter: Mr. Dmitry Rostopshin, Ship Traffic Control Solutions Director, Wärtsilä

Smart ships – Smart Navigation

Presenter: Tor Svanes, Managing Director/CEO, NAVTOR

Autonomous Ships: The presentation will provide an overview of the concept of operations for autonomous vessels, what the “system” will consist of, the infrastructure required and how and where people fit in to the puzzle.

Presenters: Mr. William Westmoreland, Compliance & Training Manager, Kongsberg Maritime, Inc.
Mr. Adrian Parasus, Lead DP Software Systems Engineer

Carnival Cruises Fleet Operations Center: FOC’s decision support role for bridge teams.

Presenter: Capt. Alan Wilson, Vice President, Marine, Holland America Group

LUNCH: 1200-1330

Emerging Technology in Maritime Piloting

Presenter: Capt. John Betz, Los Angeles Pilot

Hapag-Lloyd’s Fleet Support Center: The presentation provides an overview of Hapag-Lloyd’s Fleet Support Center and discusses both its contribution to operations and its impact upon staffing.

Presenter: Mr. Jörn Springer, Senior Director and Head of the Fleet Support Center, Hapag-Lloyd AG

e-Navigation Services: IMO plans for the development and implementation of e-navigation services.

Presenter: Mr. Fred W. Pot, Marine Management Consulting

SESSION IV: Plenary Session

The fourth session will consist of a moderated panel discussing what's needed to support the advanced initiatives in terms of organization, operations, procedures and competency requirements. The intent is to focus upon work force issues and provide recommendations for future education and training.

Moderator: Captain Alan Wilson, Vice President, Marine, Holland America Group

Panelists: Presenters from Session III

1630: **Concluding Remarks – Conference closes**