

INTERNATIONAL SYMPOSIUM  
**INFORMATION ON SHIPS**

# ISIS 2011

Hamburg, Germany  
15 - 16 September 2011

## Programme



### **German Institute of Navigation**

Deutsche Gesellschaft für Ortung und  
Navigation e. V. (DGON)

In cooperation with



German Society for Maritime Technology  
Schiffbautechnische Gesellschaft e. V. (STG)

## Introduction

### Conference Objectives and Scope

The 8<sup>th</sup> International Symposium ISIS 2011 „**INFORMATION ON SHIPS**“ will address the benefits and challenges of up-to-date information technologies on board of ships, the proper use of information, practical experiences using new information systems and the role of human being in the information-loaded environment.

Technologies, applications, and projects should be presented under the aspects: What is new and in progress? What is possible and designable? What should be done? What are the challenges?

### Steering Board

<b>Dr. Müller,</b> Reinhard Chairman	University of Technology, Business and Design, Warnemünde
<b>Callsen-Bracker,</b> Hans-Heinrich	Federal Ministry of Transport, Building and Urban Development, Bonn
<b>Hintzsche,</b> Wolfgang	German Shipowners' Association, Hamburg
<b>Dr. Jonas,</b> Mathias	Federal Maritime and Hydrographic Agency, Rostock
<b>Klindt,</b> Holger	SIGNALIS GmbH, Bremen
<b>Dr. Köhler,</b> Volker	Consulting Engineer Buxtehude
<b>Lauck,</b> Ralf-Peter	Raytheon Anschütz GmbH, Kiel
<b>Mahnke,</b> Holger	SAM Electronics GmbH Hamburg
<b>Preuss,</b> Ralf-Dieter	Federal Maritime and Hydrographic Agency, Hamburg
<b>Dr. Sandler,</b> Martin	Innovative Navigation GmbH Kornwestheim
<b>Streng,</b> Rainer	Traffic Technologies Center Koblenz
<b>Dr. Subklew,</b> Christian	Maritime Pilots' Association Wismar – Rostock – Stralsund Rostock

## Thursday, 15 September 2011

- 08:00 **Conference Registration**
- 09:00 **Conference Address**  
Welcome and Opening Remarks by a Representative of the Free and Hanseatic City of Hamburg
- 09:15 **Conference Opening**  
Prof. Dr.-Ing. Reinhard Müller  
Conference Chairman

### **SESSION 1 Human Integration**

Chairman: Wolfgang Hintzsche

- 09:30 **Usability Heuristics – Friend or Foe in Maritime Navigation Instrument Design?**  
Erik Styhr Petersen, Thomas Porathe, Margarethe Lützhöft, *SAM Electronics GmbH, Hamburg, Germany*
- 09:55 **The Research Project ‘Simulatortraining’: Steps toward a Rational Use of Simulation for Training Purpose Basic Components of “rational” Simulator Training Concepts**  
Klaus E. Mehl, *Carl von Ossietzky University Oldenburg, Germany*  
Pawel Bednarz, *Interschalt, Hamburg, Germany*  
Christoph Wand, *Jade University of Applied Sciences of Elsfleth, Germany*
- 10:20 **Coffee Break**
- 10:50 **Effects of Nautical Simulator Training on Ship Management Attitudes**  
Stefan Röttger, Saskia Seidack, Andreas Koch, Jens Kowalski, *German Naval Medical Institute, Kronshagen, Germany*
- 11:15 **Learning from Maritime Accidents by Applying Connectionism Assessment of Human Reliability**  
Karsten Loer, *Germanischer Lloyd SE, Hamburg, Germany*  
Jacqueline Holz, Georgios Athanassiou, Oliver Straeter, *University of Kassel, Germany*
- 11:40 **Lunch**

### **Session 2 Operational Integration**

Chairman: Holger Mahnke

- 12:40 **Route Planning and Monitoring for Optimal Manoeuvring by Fast Time Simulation**  
Knud Benedict, Sandro Fischer, Michael Gluch, Matthias Kirchhoff, *University of Technology, Business and Design, Warnemünde*  
Michael Baldauf, S.Klaes, *World Maritime University, Malmoe, Sweden*
- 13:05 **Simulation of Numerical Ship Navigation in Meteorology in Coastal Sea Area**  
Shigeaki Shiotani, Taisuke Soda, Hidenari Makino, Youichi Shimada, *Kobe University, Kobe, Yokohama, Japan*

13:30 **Navigation with Virtual Aids to Navigation – Taking Cross Current Effect into Consideration**  
Hua-Zhi Hsu, Chan-Chuan Wen, Ann-Bai Liu, *National Kaohsiung Marine University, Kaohsiung, Taiwan*

13:55 **Coffee Break**

### **Session 3 Functional Integration**

Chairman: Holger Mahnke

14:25 **An Approach to Enhanced Integrity Monitoring for Integrated Navigation Systems**  
Thomas Holzhüter, *HAW Hamburg, Germany*,  
Hendrik Schwab, *Raytheon Anschütz GmbH, Kiel, Germany*

14:50 **Overview of the IEC 61162-450 “Light Weight Ethernet” Ship Bridge Data Network**  
Ørnulf Jan Rødseth, *MARINTEK Trondheim, Norway*  
Morton Jagd Christensen, *Thrane & Thrane, Lyngby, Denmark*  
Kwangil Lee, *Electronics and Telecommunication Research Institute, Daejeon, R.O. Korea*

15:15 **Two new support functions for collision avoidance**  
Junji Fukuto, Yasuyuki Niwa, Makiko Minami, Kenjiro Hikida, Kenji Yoshimura,  
Masayoshi Numano, *National Maritime Research Institute, Tokyo, Japan*

15:40 **Coffee Break**

### **Session 4 E-Navigation**

Chairman: Volker Koehler

16:10 **Developments on e-Navigation**  
Javier Yasnikowski, *IMO, London, UK*

16:35 **The Shipboard Integrated Navigation System (INS) and the Shore-Provided Maritime Service Portfolio(s) – the Key Stratic Twins for e-Navigation**  
Jan-Hendrik Oltmann, *German Federal Waterways and Shipping Administration, Kiel*

17:00 **Investigations into an e-Navigation Related Approach for Onboard Decision Support for Person Overboard Accidents**  
Michael Baldauf, S. Klaes, *World Maritime University, Malmoe, Sweden*,  
K.Benedict, S. Fischer, *Hochschule Wismar, University of Applied Sciences, Warnemünde, Germany*,  
D. Meißner, *Institute for Ship Safety, Rostock-Warnemünde*,  
E. Wilske, *SSPA Sweden, Göteborg*  
V. Lander, *STENA Line, Germany*

17:25 **End of Session**

19:00 **Symposium Dinner**  
Hotel Hafen Hamburg  
Restaurant Port

**Friday, 16 September 2011**

**Session 5  
Sensors, Components and Technologies**

Chairman: Ralf-Dieter Preuss

- 08:30 **Long-Range Identification and Tracking of Ships (LRIT)**  
Javier Yasnikouski, *IMO, London, UK*
- 08:55 **Galileo and the Potentials of Satellite Navigation**  
Ulrich Reinfried, *Federal Ministry of Transport, Building and Urban Development, Berlin*
- 09:20 **Optimisation of FFT Algorithms for the Acquisition of Modernised GPS L2C Signals**  
Jayakodi Osanna, *Hindustan University, Chennai, India*
- 09:45 **Partitioned Covariance Intersection**  
Marc-Andre Beyer, *Raytheon Anschütz GmbH, Kiel, Germany*  
Arne Petersen, *Christian Albrechts University, Kiel, Germany*
- 10:10 **Coffee Break**
- 10:40 **Installation of an Experimental Galileo GBAS at Research Port Rostock**  
David Minkwitz, Angelika Hirrle, Jamila Beckheinrich, *DLR Institute of Communication and Navigation, Neustrelitz, Germany*
- 11:05 **Visual and Electronic Aids to Navigation Systems**  
Ian Burgess, *Tideland, UK*
- 11:30 **Small Target Detection and Sea Surface Surveillance with Radar**  
Hubert F. Wentzell, *Rutter Technologies Inc., Canada*
- 11:55 **Lunch**

**Session 6  
Visions, Strategies and Innovative Features**

Chairman: Reinhard Müller

- 13:00 **Vision of Maritime Communications – What can we learn & transfer from Aeronautical Communications?**  
Simon Plass, *German Aerospace Center (DLR), Oberpfaffenhofen, Germany*
- 13:25 **Shipowners' Requirements and Demands under the e-Navigation Strategy**  
Wolfgang Hintzsche, *German Shipowners' Association, Hamburg*
- 13:50 **Features and Perspectives of Fleet Management Systems – A Market Survey on Software Applications for Ship Managers**  
Carlos Jahn, Ole John, Torsten Münsterberg,, *Hamburg University of Technology, Germany*
- 14:15 **Final Discussion and Closing Remarks**  
Prof. Dr.-Ing. Reinhard Müller  
Conference Chairman
- 14:45 **Termination of ISIS 2011**

## **Administration**

### **Venue**

Hotel Hafen Hamburg  
Seewartenstrasse 9  
20459 Hamburg  
Germany

### **Conference Office**

The Conference Office will be open as follows:

Thursday 15 Sep 2011 07:30 - 18:00 hrs  
Friday 16 Sep 2011 08:00 – 15:00 hrs

Phone: + 49 - 40 31 11 3-0

Fax: + 49 - 40 31 11 3-70 601

Fax-Messages should be marked:

“(Name of Delegate) c/o ISIS Conference”

### **Conference Language**

English

### **Registration**

All delegates including authors, chairpersons and exhibitors are requested to complete the published Registration Form ([www.dgon.de](http://www.dgon.de)) as soon as possible

### **Fees**

Authors, Chairpersons	550 €
Members of DGON, STG, EUGIN	600 €
Non-Members	800 €
Retired Members of DGON	350 €
Students (proof required in advance)	50 €

The fee includes participation in the conference, documentation, soft drinks, coffee and snacks during the breaks, luncheon buffet, and participation in the “Symposium Dinner”.

### **Technical Exhibition**

Members of DGON, STG, EUGIN	900 €
Others	1200 €

The fee covers the rental of space for the exhibition for the duration of the conference and the fee for one delegate.

Equipment/ systems available or in development with respect to the topics of the symposium may be demonstrated and/ or displayed during the conference. Interested companies/ organizations who wish to exhibit or demonstrate may request further information from the

German Institute of Navigation

attn: ISIS 2011

[dgon.bonn@t-online.de](mailto:dgon.bonn@t-online.de)

### **Cancellation/ Refund Policy**

Cancellations must be made in writing. For cancellations received prior to 12 Aug 2011 the fee will be refunded, deducting 40 € handling charge. No refunds will be made for cancellations received after 12 Aug 2011.

## **Methods of Payment**

All charges are in EURO (€). Upon return of the completed Registration Form, an invoice will be mailed to each delegate. Payment should be made in € by bank transfer through the following bank:

Commerzbank AG Bonn  
Maximilianstr. 12  
53111 Bonn  
Germany

Account Name: DGON  
Account Number: 1 081 199 00  
BCN: 380 400 07  
IBAN: DE19 3804 0007 0108 1199 00  
SWIFT/ BIC: COBADEFF380

All transfers should be marked: "ISIS 2011" with invoice number and name of delegate.  
Payment with credit cards (Master or VISA) is possible at the registration desk only.

## **Symposium Proceedings**

Proceedings will be prepared in print/ CD and distributed at the beginning of the symposium.  
Authors/ presenters are therefore requested to submit the "Full Papers" to DGON by e-mail, not later than **19 Aug 2011**.

## **Public Transportation**

- From Hamburg Airport

Take the suburban train "S 1" to "Wedel" or "Blankenese" and leave at "Landungsbrücken".  
Travelling time is about 30 minutes.

- From Hamburg Main Railway Station

Take the suburban train "S1" to "Wedel" or "Blankenese" or "S 3" to "Pinneberg" and leave at "Landungsbrücken". Travelling time is about 6 minutes.

On leaving the station you will see the Conference Hotel (Hotel Hafen Hamburg) on the right hand side. A flight of stairs just below the building will take you up to the hotel.

## **Impressum**

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Web: <http://www.dgon.de>

Conference coordinator: Gerd Gronemann

Programme is subject to change.

Registrationform  
International Symposium INFORMATION ON SHIPS  
ISIS 2011

Name: \_\_\_\_\_

First Name: \_\_\_\_\_

Title/ Grade \_\_\_\_\_

Organization/ Company \_\_\_\_\_

Mailing Address \_\_\_\_\_

e-mail address \_\_\_\_\_

Tel./ Fax- № \_\_\_\_\_

- I will attend the "International Symposium INFORMATION ON SHIPS"  
– ISIS 2011 - at Hamburg, Germany, 15/ 16 September 2011
- I would like to exhibit at the ISIS 2011. Please send information for exhibitors

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Date

Signature

- |  |   |
|--|---|
| <input type="checkbox"/> Member of DGON, STG, EUGIN* | <input type="checkbox"/> Non-Member             |
| <input type="checkbox"/> Author, Chairperson         | <input type="checkbox"/> Retired Member of DGON |
| <input type="checkbox"/> Student*                    |   |

\* copy of membership card/ student photo identity card required