

25-31 May 2014

## AIDS TO NAVIGATION KNOWLEDGE AND INNOVATION

From the Torre de Hercules to e-Navigation and beyond

www.iala2014spain.com

# **CONFERENCE PROGRAMME**

Puertos del Estado







25 - 31 May

## AIDS TO NAVIGATION KNOWLEDGE AND INNOVATION

From the Torre de Hercules to e-Navigation and beyond

Conference Programme

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## From the Minister of Public Works and Transport



Since the first General Plan for Maritime Signals (now called marine aids to navigation) was promulgated in 1847, the exclusive competency in this matter has rested with the State. Today this is confirmed in Article 149.1.20 of the Spanish Constitution.

For the Government of the Kingdom of Spain – and especially for this Ministry, in which reside the competencies related to aids to navigation and maritime safety – it is an honor to be able to organize, together with the International

Association of Marine Aids to Navigation and Lighthouse Authorities, the 18th Conference and General Assembly of the Association, to be held in the city of A Coruña from 25<sup>th</sup> to 31<sup>th</sup> May 2014.

As Minister of Public Works and Transport it is my pleasure to invite anyone in the international community linked to the aids to navigation to join us in A Coruña, in the spirit of moving forward together with the important task of improving navigation safety all over the world.

Ana Pastor Julián Minister of Public Works and Transport





Ten years ago, when Spain presented its bid to host the 18th Conference and General Assembly of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), we saw it as an opportunity to showcase our experience in this field, as well as our notable technical, industrial and, of course, cultural heritage in lighthouses and other aids to navigation matters. Today, the 2014 IALA Conference is a tangibility that has been invested with absolute dedication and an

enormous excitement, in order to attain the stated objectives and the required level of excellence in its organization.

We are preparing a conference in line with present times, with austerity but maintaining the standards of quality and innovation – a concept that is part of the theme of the Conference. There will also be a pre-conference seminar devoted to training in aids to navigation, where the work and action points of the World Wide Academy (WWA) of IALA will be presented.

The city of A Coruña is ready to welcome delegates and guests to this new edition of the IALA Conference in the last week of May 2014, coinciding with the commemoration of the 5th Anniversary of the Proclamation of the Tower of Hercules Lighthouse as a World Heritage Site by UNESCO.

As President of Puertos del Estado, the national authority on marine aids to navigation in Spain, I am honoured to invite experts worldwide in this matter to join us at this event, contributing their knowledge and experience, always with the aim of improving navigation safety and facilitating passenger and freight traffic in all the seas and oceans of the world. Spain and Galicia, land called Finis Terrae for many centuries "the end of the earth", await you, and are sure to amaze you.

> José Llorca Ortega President of Puertos del Estado



From IALA Secretary General



On behalf of the **Council of IALA I** welcome you to A Coruña, to our **18th Conference**, the first time we have gathered for such an event on mainland Europe for some years.

The Kingdom of Spain has been a valuable contributor to the activities of IALA at all levels for many years and Puertos del Estado is a highly respected and capable organisation.

We are going to meet at a significant venue and are certainly aware of the importance of the Tower of Hercules in aids to navigation development over two millennia, a subject in its many forms, which will be debated when we gather in Galicia.

A broad agenda has been assembled across the various disciplines we bring together at IALA, experts from the four corners of the earth to deliver their knowledge for the benefit of our membership and, in turn, the world's maritime community. At the same time our Industrial Members will be able to show their products and services in an exclusive exhibition and take benefit from this unique opportunity to meet and discuss with their customers and clients.

There are exciting times ahead in the field of aids to navigation and the related sciences and I do not doubt that all seventy presentations, carefully selected amongst more than 150 received will be just fascinating. I am assured you will not be disappointed.

At the Conference we will hold the General Assembly and elections to the Council will take place to ensure the governance of IALA for the following four years span until we gather again in the Republic of Korea in 2018.

I look forward to greeting our membership, some members who we will welcome for the first time to an IALA Conference; others who we have not seen since Cape Town in 2010.

The 18th IALA Conference to be held in A Coruna, Spain in 2014, is I am sure going to be another memorable event in the history of IALA.

Gary Prosser IALA Secretary General



## From the Conference Director



As someone who came into the field of marine aids to navigation 20 years ago, it is a great honour to head up the team who have been organizing an IALA Conference in their country.

I would like to highlight the trust that the IALA has placed in Spain through the Puertos del Estado organization in recognition of the progress made in this field in which numerous professionals have demonstrated their expertise and personal commitment to our Association. This has been

especially noteworthy since, in 1994, we started participating actively in both the Council and the different Committees, spearheaded by the Technical Department Manager at that time, Arturo Aguado.

Since the IALA entrusted the organization of this Conference to Puertos del Estado, through Secretary General Torsten Kruuse, whose confidence and support through all the years of shared activities on behalf of the IALA I would like to recognise here, other people have taken on the role of Conference Director, namely Manuel Gómez and Xavier Gesé, who I should like to thank for all their hard work on the project which has now reached its crowning moment: the Conference itself.

It would be easy to overlook the many contributions to the project, but its three main cornerstones – Puertos del Estado, IALA and the company entrusted with the material and logistical organization of the event, Orzan Congres – have made it possible through the hard work and input of everyone who has been involved at some phase of the project. I must recognize the input of Eva Miquel and Angustias Lerín, Laura Manzano and Rosa Yubero from Puertos del Estado; of Maika Romero and Marta Bouso from Orzan Congres; and most especially Marie-Hélène Grillet, who needs no introduction, with whom it has been such a pleasure to work on this project. Her contribution, especially in the preparation and coordination of the technical documents, has been vital. Enrique Bernabeu, as president of the IMC Committee, has been tremendously helpful in every aspect of the industrial exhibition.

Naturally none of this would have been possible without the support and leadership of IALA Secretary General, Gary Prosser Gary Prosser, and the President of Puertos del Estado, José Llorca, whose commitment to and involvement in the project have provided us with support and guidance throughout. We have tried to put together a Conference which lives up to its slogan: Knowledge and Innovation. In this sense, we have created the first paperless conference, using new mobile technologies and the internet; a tablet will be our tool for following the technical sessions. Meanwhile, after a quick look at the presentations, I can confirm that the standard is extremely high, so the Conference reflects the current level of technical excellence in contemporary aids to navigation, not just the new technologies that fall under the umbrella of e-navigation, but also the classic ones.

I would like to thank all the delegates and IMC exhibitors for their support, and I hope that this Conference will meet your expectations. This has been our motivation throughout the whole process.

Finally, I would like to join in the celebration of the 500th anniversary of Trinity House, which is the reason why the Conference and the IALA family will have the honour of hosting a visit by HRH Princess Anne of England as the Master of this institution.

My thanks once again to you all, and I look forward to seeing you in A Coruña.

Juan Francisco Rebollo Project Manager of IALA-2014





President of Honour HRH Felipe de Borbón y Grecia, the Prince of Asturias

Vice-presidents Mr. Alberto Núñez Feijoo President of the Galician Regional Government

Ms. Ana Pastor Julián Minister of Public Works and Transport

**Members** 

Mr. Samuel Jesús Juárez Casado Government Delegate in Galicia

Mr. Carlos Negreira Souto Mayor of A Coruña

*Mr. Rafael Catalá Polo* Secretary of State for Infrastructures, Transport and Housing, Ministry of Public Works and Transport

*Mr. Jaime Muñoz-Delgado Díaz del Rio Admiral Chief of Naval Staff of the Spanish Navy* 

*Ms. Rosa Quintana Carballo Regional Minister for Agriculture Rural Development and Maritime Affairs. Galician Government* 

*Mr. José Llorca Ortega President of Puertos del Estado* 

Mr. Enrique Losada Rodríguez President of the Port Authority of A Coruña

*Mr. Rafael Rodríguez Valero Director-General of the Merchant Marine and President of the Spanish Maritime Safety Agency* (SASEMAR)

Mr. Koji Sekimizu Secretary- General of the International Maritime Organization, IMO

*Mr. Robert Ward President of the International Hydrographic Organization, IHO* 

*Mr. David Gordon President of the International Association of Marine Aids to Navigation and Lighthouse Authorities, IALA* 

*Mr. Gary Prosser* Secretary-General of the International Association of Marine Aids to Navigation and Lighthouse Authorities, IALA



# National Organizing Committee

#### President

Mr. José Llorca Ortega President of Puertos del Estado

#### Vice-president

*Mr. Juan Francisco Rebollo Lledó* Head of the Spanish Marine Aids to Navigation Service, Puertos del Estado Conference Director

#### Members

*Mr. José Juan Durán Hermida President of Portos de Galicia* 

*Mr. Enrique Losada Rodríguez President of the Port Authority of A Coruña* 

Ms. M<sup>a</sup> Luisa Cid Castro Deputy Mayor of Employment and Enterprise at the A Coruña City Council

Mr. Álvaro Rodríguez Dapena Technical Director of Puertos del Estado

*Ms. Eva Miquel Subías* Corporate Communication Manager of Puertos del Estado

Mr. Juan Luis Pedrosa Fernández General Director of the Spanish Maritime Safety Agency (SASEMAR)

Mr. José Ramón Fernández de Mesa Temboury Commander Director of the Naval Hydrographic Institute. Spanish Navy

*Mr. Manuel Gómez Martín* Deputy Director of Customer Service of Puertos del Estado IALA Vice-President

*Ms. Nuria Gaitón Redondo Head of Department International Relations of Puertos del Estado* 

Mr. Ramón Castro González Head of Communications and Public Relations of the Port Authority of A Coruña

Ms. Angustias Lerín del Abril Head of Department External Relations and Business Development of Puertos del Estado

*Mr. Enrique Bernabéu Dolz Product Manager of La Maquinista Valenciana President of the IALA Industrial Members Committee* 

*Ms. Rosa María Yubero Sierra International Relations Department of Puertos del Estado Secretary of the Organizing Committee* 



#### Committee, Panel and WWA heads:

Chair, EEP Committee Mr. Omar Frits Eriksson Danish Maritime Authority

Chair, ANM Committee Captain Phil Day Northern Lighthouse Board, Scotland

Chair, VTS Committee Capt. Tuncay Cehreli Directorate General of Coastal Safety, Turkey

Chair, e-NAV Committee Mr. William R Cairns US Coast Guard

Chair, Legal Advisory Panel Mr. Francis Zachariae Danish Maritime Authority

Dean, IALA WWA R-Adm. Jean-Charles Leclair

#### IALA

IALA Secretary General (Chairman) Mr. Gary Prosser

IALA Administration Manager (Secretary) Ms. Marie-Hélène Grillet

IALA Deputy Secretary General Mr. Michael D. Card

IALA Committee Secretary Mr. Seamus Doyle

#### IMC

Mr. Enrique Bernabéu La Maquinista Valenciana SA, Spain

Mr. Steve J Nell Marine Data Solutions, South Africa

Host country Mr. Juan Francisco Rebollo Puertos del Estado, Spain



#### Committee Chairs and Vice Chairs:

Vice Chair, EEP Committee Mr. David Jeffkins Australian Maritime Safety Authority

Chair, ANM Committee Captain Phil Day Northern Lighthouse Board, Scotland

Vice Chair, ANM Committee Mr. Michael Skov Danish Maritime Authority

Chair, VTS Committee Capt. Tuncay Cehreli Directorate General of Coastal Safety, Turkey

Vice Chair, VTS Committee Mr. Neil Trainor Australian Maritime Safety Authority

Chair, e-NAV Committee Mr. William R Cairns US Coast Guard

Vice Chair, e-NAV Committee Dr. Nick Ward GLA – RRNAV, United Kingdom

IALA IALA Deputy Secretary General *Mr. Michael D. Card* 

# PROGRAMME AT A GLANCE

PROGRAMME AT A GLANCE

PRE-CONFERENCE	COUNCIL		NFERENCE COUNCIL CONFERENCE		
Saturday 24 <sup>th</sup> Pre-Conference Seminar o Auditorium: 2 <sup>nd</sup> floor	Sunday 25 <sup>th</sup> Council and Registration Room 8: 2 <sup>nd</sup> floor		Monday 26 <sup>th</sup> Opening day and IALA report Gaviota Auditorium: Ground floor	Tuesday 27 <sup>th</sup> Aids to Navigation Provision Gaviota Auditorium Ground floor	
08:30-09:15 Registration			09:00-10:00 Registration	09:00-10:30 Session 1.1	
09:30-10:00 Session 1					
10:00-11:00 Session 2	10:00-11:00 Council		10:00-10:30 Opening show	-	
Session 3			10:30-11:00 Coffee break	10:30-11:00 Coffee break	
11:00-11:30 Coffee break			11:00-11:30 Keynote speech	11:00-12:30 Session 1.2	
11:30-12:30 Session 4	11:30-12:00 Coffee break	d floor	11:30-12:30 IALA activities		
12:30-13:30 Session 5	12:00-13:30 Council	o - groun	12:30-14:00 Lunch break	12:30-14:00 Lunch break	
13:30-15:00 Lunch break	13:30-15:00 Lunch break	n: Palexo	14:00-16:00 IALA activities	14:00-15:30 Session 1.3	
15:00-17:00 Session 6		Registration: Palexco - ground floor		15:30-16:00 Coffee break	
		gate	16:00-16:30 Coffee break	16:00-16:30 Group photo	
		Dele	16:30-17:00 Official Opening Conference and Industrial Exhibition	16:30-18:00 General Assembly Session 1	
17:00-17:30 Coffee break			17:00 Visit the exhibition	- Arao Auditorium	
17:30-18:00 Session 7	18:30 Welcome				
	Reception		20:00 Conference Dinner Pazo de Santa Cruz de Mondoi	-	

#### CONFERENCE

Wednesday 28 <sup>th</sup> e-Navigation & beyond Gaviota Auditorium:	Thursday 29 <sup>th</sup> Global navigation Gaviota Auditorium:	Friday 30 <sup>h</sup> Management Gaviota Auditorium:	Saturday 31 <sup>th</sup> Heritage Gaviota Auditorium:
09:00-10:30 Session 2.1	Gaetora Autorium: Ground floor 09:00-10:30 Session 3.1	Ground floor 09:00-10:30 Session 4.1*	09:00-11:00 Heritage session
10:30-11:00 Coffee break	10:30-11:00 Coffee break	10:30-11:30 The 500th Anniversary	
11:00-12:30	11:00-12:30       11:00-12:30         Session 2.2       Session 3.2	of The Corporation of Trinity House	11:00-11:30 Coffee break
22221011 2.2		11:30-13:00 Session 4.2	11:30-12:30 Conclusions and venue next Conference Korea
12:30-14:00 Lunch break	12:30-14:00 Lunch break	13:00-14:00 Lunch break	12:30-14:00 Lunch break
14:00-15:30 Session 2.3	14:00-15:30 Session 3.3	14:00-15:30 Session 4.3	14:00-15:30 General Assembly Session 2 (elections) and (during the tir for results) venue VTS-2016 Malaysia <i>Arao Auditorium</i>
15:30-16:00 Coffee break	15:30-16:00 Coffee break	15:30-16:00 Coffee break	15:30-16:30 58th IALA Council <i>Room 8</i>
16:00-17:30 Session 2.4	16:00-17:30 Session 3.4	16:00-18:30 Best practices session	
20:00 IMC Evening <i>Marina Coruña</i>		* 09:00-12:30 Attendance by H.R.H. The Princess Royal, Princess Anne, Master, The Corporation	20:00 Gala Dinner <i>Hesperia Finisterre Hotel</i>

# CAPACITY BUILDING PRE-CONFERENCE SEMINAR



#### 08.30-09.15 Registration

<u>09.15-10.00</u> Session 1: Introduction to the seminar Opening Ceremony Objectives of the Seminar Maritime Safety, Safety of Ships/Safety of Navigation Mr. Gary Prosser. IALA SG Mr. Juan-Francisco Rebollo. Puertos del Estado Mr. Jean-Charles Leclair. Dean IALA World-Wide Academy

10.00-11.00 Session 2: IALA and other International Organizations concerned - Legislation IALA and the IALA World-Wide Academy International Organizations involved in Safety of Navigation Obligations of a Coastal State International Regulations - Conventions, Recommendations, Guidelines National Legislation *Mr. Jean-Charles Leclair. Dean IALA World-Wide Academy* 

> Session 3: IALA's International Standards The IALA Maritime Buoyage System The IALA Recommendations and Guidelines Mr. Jacques Manchard. IALA Senior Adviser

- <u>11.00-11.30</u> Coffee
- <u>11.30-12.30</u> Session 4: AtoN Personnel Training and Certification The Level 1+ Awareness Seminar Training for AtoN Services Personnel AtoN Training and IALA Model Courses Level 1 and Level 2 Accreditation of Training Organizations Mr. Stephen Bennett. Programme Manager. IALA World-Wide Academy
- <u>12.30-13.30</u> Session 5: VTS Personnel Training and Certification Training for VTS Personnel VTS Training and IALA Model Courses Accreditation of Training Organizations Mr. Tuncay Cehreli. Chair IALA VTS Committee

#### <u>13.30-15.00</u> Lunch

15.00-17.00 Session 6: Practical examples Spain - VTS and AtoN: Mr. Juan F. Rebollo and Mr. Carlos Fernández Salinas Australia: Ms. Jillian Carson-Jackson Brasil: Captain Alberto Piovesana Junior Chile: Commander James Crawford France: Captain Vincent Denamur Japan: Commander Hideki Noguchi Republic of Korea: Professor Doctor Seung-Gi Gug

#### <u>17.00-17.30</u> Coffee

17.30-18.00 Session 7: Final Discussion and debrief Discussion, Conclusions and Recommendations Closing Ceremony Mr. Gary Prosser. IALA SG Mr. Juan-Francisco Rebollo. Puertos del Estado Mr. Jean-Charles Leclair. Dean IALA World-Wide Academy





09:00-10:00 Registration

10:00-10:30 Opening show

<u>10:30-11:00</u> Coffee

- <u>11.00-11.30</u> Keynote speech Mr. Koji Sekimizu. IMO Secretary General
- <u>11.30-11.50</u> IALA activities by Secretary General and introduction of Committee overview sessions *Mr. Gary Prosser*
- 11.50-12.10 IALA activities: Committee ANM Mr. Phil Day
- 12.10-12.30 IALA activities: Committee EEP Mr. Omar Fritz Eriksson
- <u>12:30-14:00</u> Lunch
- 14.00-14.20 IALA activities: Committee ENAV Mr. Bill Cairns
- 14.20-14.40 IALA activities: Committee VTS Mr. Tuncay Cehreli
- <u>14.40-14.55</u> IALA activities: IMC Mr. Enrique Bernabéu
- <u>14.55-15.10</u> IMO/ITU & other international organizations *Mr. Michael Card*
- <u>15.10-15.25</u> IALA activities: LAP (explaining change of status) *Mr. Francis Zachariae*
- 15.25-15.40 e-Navigation SIP Ms. Kirsti Slotsvik
- 15.40-15:50 IALA Activities: IALA-NET and Risk Assessment Tool Mr. Jean-Charles Leclair
- 15.50-16.00 IALA Activities: WWA Mr. Jean-Charles Leclair
- <u>16.00-17.00</u> Official Opening Conference and Industrial Exhibition Chaired by: *Ms. Ana Pastor. Minister of Public Works and Transport*
- <u>17.00</u> Visit the Exhibition

# TECHNICAL SESSIONS



#### 09.00-10.30 Session 1.1

Chair: Mr. Omar Fritz Eriksson, Danish Maritime Authority. Denmark ViceChair: Mr. Amadou Ndiaye, Port Autonome de Dakar. Senegal

84 'Effective Intensity – Is it Effective?' Mr. Malcolm Nicholson. General Lighthouse Authorities, United Kingdom & Ireland

#### 602259 Integrated AtoN information system (I-ATONIS Service) and added value applications

Mr. Eduardo González, Mr. Antonio Cebríán, Port Authority of Barcelona. Spain Mr. Juan-Francisco Rebollo (Speaker), Mr. Enrique Tortosa, Puertos del Estado. Spain Mr. Carlos Calvo (Speaker), Port Authority of Santander. Spain Mr. Marcos López (Speaker), GMV. Spain

19 Conversion of light buoys in the North and Baltic Sea on compact lighting units with LED and solar technology, AIS and remote monitoring Mr. Peter Schneider. Federal Waterways and Shipping Administration, Germany

109 Laser Technologies for Visual Aids to Navigation Mr. G A Kaloshin. Zuev Institute of Atmospheric Optics, Russian Academy of Sciences, Russia

37 Implementing a new modularly designed Radar Service during continuous nautical operation

Mr. Mark Thumann, Mr. Sascha Heesch (Speaker). Federal Waterways and Shipping Administration, Germany

#### 10.30-11.00 Coffee: Exhibition areas

#### 11.00-12.30 Session 1.2

Chair: Mr. Carlos Calvo, Port Authority of Santander, Spain ViceChair: Mr. Adam Hay, Nawae Construction Ltd., Papua New Guinea

39 New lighthouse at the northern enlargement of Valencia harbour Mr. Ignacio Pascual. Port Authority of Valencia, Spain

20 The Processes in the Maritime Transport Chain and how to link them Mr. Dirk Eckhoff. Federal Waterways and Shipping Administration, Germany

81 Evolution of remote monitoring systems. Examples of systems at A Coruña and Ferrol Port Authorities (Galicia region, Spain)

Mr. Antonio Martínez. Mediterráneo Señales Marítimas S.L.L. (MSM), Spain

#### 118 A-to-N project management for deep-water navigation channel at Yangtze **River Estuary**

Mr. Liu Jiahua (Speaker). Shanghai Maritime Safety Administration, China Ms. Yang Jianyun. CCCC Shanghai Waterway Engineering Design and Consulting Co., Ltd., China

#### 86 E-200 Explained

Mr. Malcolm Nicholson. General Lighthouse Authorities, United Kingdom & Ireland

# **27** Aids to Navigation Provision

#### 12.30-14.00 Lunch: Palexco ground floor

#### Session 1.3

14.00-15.30

Chair: Mr. David Jeffkins, Australian Maritime Safety Authority, Australia ViceChair: Mr. Kribashin Coopoo, Transnet National Ports Authority, South Africa

#### 99 A new radio system for the German coast - Innovative applications for conventional VHF

Mr. Ralf Oppermann. Schnoor-INS GmbH & KG, Germany

#### 15 Implementation of the Voice/DSC VHF Radio Communication Service with Simulcast Broadcasting at the German Coast

Mr. Heinz Park. Federal Waterways and Shipping Administration, Germany

#### 27 Aids to Navigation and Automatic Identification System: a winning combination for safety support. The Italian experience

Mr. Piero Pellizzari. Italian Coast Guard - Headquarters, VII Department "ITC and Maritime Traffic Monitoring", Italy

#### 3547 VHF Data Exchange System (VDES). A new means for data communication to support e-Navigation

Mr. Hideki Noguchi (Speaker). Navigational Safety System Development Office, Aids to Navigation Engineering Division, Maritime Traffic Department, Japan Coast Guard, Japan Mr. Stefan Bober (Speaker). Federal Waterways and Shipping Administration, Germany

125 Advances in radar aids to navigation Mr. Paul F Mueller. Tideland Signal Corporation, USA



#### <u>09.00-10.30</u> Session 2.1

Chair: Mr. Bill Cairns, US Coast Guard, USA ViceChair: Mr. Min-Su Jeon, Korea Association of Aids to Navigation, Republic of Korea

8798 e-Navigation and the ACCSEAS project Mr. Alwyn I. Williams. General Lighthouse Authorities, United Kingdom & Ireland

66 Performance Simulation of the Future Korean eLoran System Mr. Joon Hyo Rhee (Speaker), Mr. Jiwon Seo. Yonsei University, Republic of Korea

46 Recapitalization of the MF radio beacon system based on VRS Mr. Michael Hoppe (Speaker). Federal Waterways and Shipping Administration, Germany Mr. Jesper Bäckstedt (Speaker). Swedish Maritime Administration, Sweden

69 Ship domain observed in AIS data Mr. Tue Lehn Schiøler. Rambøll, Denmark

91 The Implications of Using Non-Approved PNT Devices at Sea Mr. Jan Šafář, Mr. Alan Grant (Speaker), Mr. Martin Bransby, Mr. Nick Ward, Mr. David Last. General Lighthouse Authorities, United Kingdom & Ireland

#### <u>10.30-11.00</u> *Coffee: Exhibition areas*

11.00-12.30 Session 2.2

Chair: Mr. Mike Sollosi, US Coast Guard, USA ViceChair: Mr. Michael Skov, Danish Maritime Authority, Denmark

30 AIS Aids to Navigation: Development of IMO Policy and New Symbols *Mr. Hideki Noguchi. Navigational Safety System Development Office, Aids to Navigation Engineering Division, Maritime Traffic Department, Japan Coast Guard, Japan* 

94 Automatic identification system capabilities to improve U.S. waterway operations

Mr. Jorge Arroyo (Speaker), Mr. Brian J Tetreault. U.S. Coast Guard, USA

107 The European Satellite-AIS Data Processing Center developed by CLS for the European Space Agency and European Maritime Safety Agency. How will such infrastructure support e-Navigation?

Mr. Gaëtan Fabritius. Collecte Localisation Satellites CLS, France

67 Behavior recognition assisting maritime situational awareness *Mr. Florian A Gruber. Frequentis AG, Austria* 

79 Achievement of AtoN in Turkey (finalizing SOTAS project) Mr. Celalettin Uysal. Aids to Navigation Department, Turkey

<u>12.30-14.00</u> Lunch: Palexco ground floor



#### 14.00-15.30

Session 2.3

Chair: Ms. Peggy Browning, ExactEarth, Canada ViceChair: Mr. Sebastián Espinar, Puertos del Estado, Spain

2 Communication for e-Navigation Mr. Rolf Zetterberg. Swedish Maritime Administration, Sweden

63 IALA'S VHF Data Exchange System (VDE). A foundation for e-navigation communications and GMDSS modernization *Mr. William D. Kautz. U.S. Coast Guard, USA* 

9297 Common Maritime Data Structure for e-Navigation and the Maritime Cloud Mr. Nick Ward (Speaker). General Lighthouse Authorities, United Kingdom and Ireland Mr. Thomas Christensen (Speaker), Mr. O Bakman Borup. Danish Maritime Authority, Denmark

## 31 Improvement of Maritime Information and Communications System (MICS): e-navigation for small ships

*Mr. Hideki Noguchi.* Navigational Safety System Development Office, Aids to Navigation Engineering Division, Maritime Traffic Department, Japan Coast Guard, Japan

11 Maritime Domain Awareness, the Chilean experience Mr. James Crawford. Directorate General Maritime Territory and Merchant Marine, Chile

#### 16.00-17.30 Session 2.4

Chair: Mr. Nick Ward, General Lighthouse Authorities, United Kingdom and Ireland ViceChair: Ms. Catherine Steenberg, Force Technology, Denmark

129 R-Mode using Transmissions from existing IALA Radio beacon installations Mr. Michael Hoppe. Federal Waterways and Shipping Administration, Germany

105 To infinity and beyond... Whats is the future of maritime communications? *Ms. Jillian Carson-Jackson (Speaker), Mr. Peter Pokorny. Australian Maritime Safety Authority, Australia* 

#### 61 Product Specifications Demystified

*Mr. Peter Hooijmans (Speaker). Rijkswaterstaat National Vessel Traffic Management Centre, Ministry of infrastructure and the Environment, The Netherlands Mr. Jarle Hauge. Norwegian Coastal Administration, Norway* 

120 Navigation aids information distribution service in the e-Navigation Mr. Lu Xiang, Mr Jinxing Shao. Xiamen Aids to Navigation Branch of Shanghai Maritime Safety Administration, China Ms. Zhiping Ren, Mr. Guojun Peng, Mr. Xinggu Zhang. Ship Navigation Aids Technique Research Institute, China

76 Development of S-100 based new Product Specification for AtoN and Method for Integration with Legacy Systems

Mr. Daewon Park, Mr. Jaeyang Park, Mr. Jong-Uk Kim, Ms. Suhyun Park (Speaker). Dongseo University, Republic of Korea



#### 09.00-10.30

Session 3.1

Chair: Mr. Tuncay Cehreli, Coastal Safety, Turkey ViceChair: Mr. José Manuel Díaz, Centro Jovellanos, Spain

# 29 The Role of Coastal VTS in enhancing maritime safety and marine environment issues in the Strait of Hormuz *Mr. Ahmad Parhizi. Ports and Maritime Organization, Iran*

#### 43 VTS Fehmarn Belt - A Danish/German Project

Mr. Harmut Hilmer (Speaker), Mr. Gerhard Müller Hagen. Federal Waterways and Shipping Agency, Germany Mr. Niels Jakob Mygind. Danish Maritime Administration, Denmark

#### 78 Finding solutions before accidents happen

*Mr. Cem Gazioglu. Istanbul University, Institute of Marine Science and Management, Turkey Mr. Hasan Terzi (Speaker). Istanbul VTS Centre, Directorate General of Coastal Safety, Turkey* 

124 Close quarter situation reporting by Ushant VTS Mr. Jean-Charles Cornillou. CEREMA, France

128 The Spanish Maritime Safety Agency Mr. Juan Luis Pedrosa. The Spanish Maritime Safety Agency, Spain

#### <u>10.30-11.00</u> *Coffee: Exhibition areas*

#### 11.00-12.30 Session 3.2

Chair: Mr. Mahesh Alimchandani, Australian Maritime Safety, Australia ViceChair: Mr. Michael Cousquer, CEREMA, France

8 A Methodology to allow VTS Centers to monitor, in real-time, the performance of the AIS infrastructure

Mr. Magnus Nyberg, Mr. Peter Dolan (Speaker). Pharos Marine Automatic Power, Inc, United Kingdon

# 21 Analogy between the VTS Centres Human Machine Interface and the Vessels' Integrated Bridge

Mr. Dirk Eckhoff. Federal Waterways and Shipping Administration, Germany

# 32 The improvement of VTS operation capability with the introduction of Ku-band Solid-Sate Radar

*Mr. Hiroaki Tanaka, Mr. Kazuyuki Tanaka. Aids to Navigation Engineering Division, Maritime Traffic Department, Japan Coast Guard, Japan* 

Speaker: Hideki Noguchi. Navigational Safety System Development Office, Aids to Navigation Engineering Division, Maritime Traffic Department, Japan Coast Guard, Japan

52 How human factors can help on improving control room performance *Mr. Volker Grantz, Mr. Gerd Palmetzhofer (Speaker). Frequentis AG, Austria* 

72 Reducing operator workload and stress through co-operative human-machine systems *Mr. Todd Schuett. Kongsberg Norcontrol IT, Norway* 



#### <u>12.30-14.00</u> Lunch: Palexco ground floor

#### 14.00-15.30 Session 3.3

Chair: Mr. Thomas Christensen, Danish Maritime Administration, Denmark ViceChair: Mr. Hideki Noguchi, Japan Coast Guard, Japan

93 Enhancing VTMIS data management with Service Oriented Architecture (SOA)- Case study: FTA's Vessel Traffic Management Systems *Ms. Kaisu Heikonen. Finnish Transport Agency, Finland* 

100 The shipping industry and marine spatial planning. A professional approach Mr. David Patraiko (Speaker). FNI, Master Mariner. The Nautical Institute, United Kingdom Mr. Paul Holthus. World Ocean Council, United Kingdom

103 Holistic marine spatial planning. Safety beyond the environment Mr. Nick Lemon, Mr. Alec Millet. Australian Maritime Safety Authority, Australia Speaker: Mahesh Alimchandani. Australian Maritime Safety Authority, Australia

104 Capacity building initiatives in the south west Pacific to enhance the safety of navigation *Mr. Brad Groves. Australian Maritime Safety Authority, Australia* 

126 Increased sustainability of sea transport by integration of ICT and ITS solutions: The MONALISA 2.0 project *Mr. Anders Brodje, Mr. Ulf Svedberg. Swedish Maritime Administration, Sweeden* 

#### <u>16.00-17.30</u> Session 3.4

Chair: Mr. Michael Hoppe, Wasser-und Schiffahrstdirektion, Germany ViceChair: Mr. Jorge Teles, Direcçaô de Farois, Portugal

7 Innovative use of Aids to Navigation in marking Wave & Tidal Renewable Energy sites

Mr. Peter Douglas. Northern Lighthouse Board, Scotland, United Kingdom

70 VTS a Risk Reducer - A Quantitative Study of the Effect of VTS Great Belt Mr. Tue Lehn-Schiøler (Speaker), Mr. M.G. Hansen, Mr. K. Melchild, Mr. T.K. Jensen, Mr. S. Randrup-Thomsen, Mr. K.A.K. Glibbery, Mr. F.M. Rassmussen, Mr. F. Ennemark. Rambøll, Denmark

71 The safety of the human element in the maintenance of marine aids to navigation

Mr. James Crawford. Directorate General Maritime Territory and Merchant Marine, Chile

77 Sea peril management and role of VTS Mr. Ugur Karabay. Ministry of Transport, Maritime and Communication, Turkey

130 Future VTS services in the 6 e Navigation areas, beyond territorial waters *Mr. Jon Leon Ervik. Norwegian Coastal Administration, Norway* 



30



#### 09.00-10.30

Session 4.1

Chair: Mr. Phil Day, Northern Lighthouse Board, United Kingdom ViceChair: Mr. Juan Francisco Rebollo, Puertos del Estado, Spain

1 The cooperative inland waterways safety programme in South Africa Mr. James Collocott. SAMSA, South Africa

14 Route Topology Modelling as a potential means to reconcile Marine Spatial Planning with Demands of the Sea Traffic – the North Sea example *Mr. Jan-Hendrik Oltmann. Federal Waterways and Shipping Administration, Germany* 

4018 Introduction of an Operation & Maintenance Framework for the Coastal Wide Aids-to-Navigation Network at the German Coast and Integrated Management System for Maintenace Processes

*Mr. Sascha Heesch (Speaker), Mr. Thomas Kuckling. Federal Waterways and Shipping Administration, Germany* 

34 Lessons on disaster preparedness for Aids to Navigation learned from the Great East Japan Earthquake

*Mr. Kazuyuki Tanaka. Aids to Navigation Engineering Division, Maritime Traffic Department, Japan Coast Guard, Japan* 

Speaker: Hideki Noguchi. Navigational Safety System Development Office, Aids to Navigation Engineering Division, Maritime Traffic Department, Japan Coast Guard, Japan

110 The Aids to Navigation (AtoN) Service in Spain Mr. Javier Martín Santo Domingo (Speaker), Mr. Juan Francisco Rebollo. Puertos del Estado, Spain

#### <u>10.30-11.30</u> The 500th Anniversary of The Corporation of Trinity House. HRH Princess Royal, Princess Anne, Master, The Corporation of Trinity House

<u>11.30-13.00</u> Session 4.2

Chair: Mr. Roger Barker, Trinity House, United Kingdom ViceChair: Ms. Kaisu Heikonen, Finnish Transport Agency, Finland

50 Maintenance of Aids to Navigation based on knowledge, innovation and integration of IALA guidelines and recommendations

*Mr. Nick Goethals. Vlaamse Overheid - Agentschap voor Maritieme Dienstverlening en Kust - Afdeling Scheepvaartbegeleiding, Belgium* 

51 Risk management in waterways affected by hurricanes Mr. Julio Fidel Sierra Almaguer. Hydrographic and Geodetic Service of the Republic of Cuba

56 Development, maintenance and provision of AtoN services. Who pays for them?

Mr. Álvaro Rodríguez. Puertos del Estado, Spain

74 Quantitative Risk assessment and the Complimentary use of IWRAP *Mr. Roger Barker. Trinity House, United Kingdom* 



<u>13.00-14.00</u> Lunch: Palexco ground floor

#### <u>14.00-15.30</u> Session 4.3

Chair: Mr. Seung-gi Gug, Korea Maritime University, Republic of Korea ViceChair: Ms. Monica Sundkley, Swedish Maritime Administration, Sweden

83 Atlantic Coast Port Access Route Study and Coastal Marine Spatial Planning

Mr. George H. Detweiler Jr. U. S. Coast Guard, USA

88 'Light Measurement of Tower of Hercules Lighthouse' Mr. Malcolm Nicholson. General Lighthouse Authorities, United Kingdom and Ireland Speaker: Link Powell

101 Outsourcing of AtoN maintenance services – innovation in tendering, contracting and managing these services in Australia *Mr. Gerry Brine (Speaker), Mr. David Jeffkins. Australian Maritime Safety Authority, Australia* 

38 e-Navigation Starts with e-Voyage Planning Mr. Geir L. Olsen. Jeppesen Norway, Norway

115 Real-time risk assessment for aids to navigation using fuzzy-FSA Ms. Tingting Chen, Mr. Jinbiao Chen (Speaker), Mr. Chaojian Shi, Mr. Dongxing Jia. Shanghai Maritime University, China

116 Risk assessment of new dangerous wreck marking Mr. Yongqiang Lu. Shanghai Maritime Safety Administration, China



<u>16.00-18.00</u> Best practices session Chair: Mr. Eric Vassor, CEREMA, France

BP1 Improving daytime visibility of some buoys in Santander Port *Mr. Carlos Calvo (Speaker), Mr. Luis Álvarez. Port Authority of Santander, Spain* 

BP2 IVEF implementation in polish National Maritime Safety System Mr. Artur Baranowski (Speaker), Mr. Jan Moltkowski, Mr. Michal Burka. Sprint, S.A., Poland

BP3 Utilisation de sources lumineuses a LED dans les optiques traditionnelles Mr. Yves-Marie Blanchard, CETMEF, France Speaker: Mr. Michel Cousquer, CEREMA, France

BP4 Handbook for Nautical Studies Mr. Ernst Bolt. Ministry of Infrastructure and the Environment, The Netherlands

BP5 How to reduce bad habit in VTS operators Mr. Carlos Fernández Salinas. Spanish National Agency for Maritime Safety and Rescue, Spain

BP6 AtoN's remote monitoring and AtoN's remote control with AIS messages with a dedicated low cost coastal Station *Mr. Pierre-Yves Martin. CETMEF, France Speaker: Mr. Jean-Charles Cornillou, CEREMA, France* 

BP7 Dynamic Chart Overlays to maximize the safety of navigation and assist in contingency planning *Mr. Jonathon Pearce (Speaker), Mr. John Finch. OMC International, Australia* 

BP8 Handling of echoes using VoIP technology in case of multiple shore reception of maritime communications

Mr. Romain Gallen, Mr. François Bajard-Jacobs, Mr. Patrick Doaré, Mr. Thierry Le Podre. CETMEF, France Speaker: Mr. Jean-Charles Cornillou, CEREMA, France

BP9 The use of AIS in a mixed area Mr.Jeffrey Van Gils. Rijkswaterstaat Water, Traffic and Environment, The Netherlands

BP10 Reparation d'une tourelle en mer a l'aide de beton fibre ultra performant (BFUP)

*Mr. Nicolas Fady, Mr. Emmanuel Denarie. CETMEF-DT/TSMF/PIE, France Speaker: Mr. Michel Cousquer, CEREMA, France* 



#### <u>09.00-11.00</u> Heritage session

Chair: Mr. Bob McIntosh, Northern Lighthouse Board, United Kingdom ViceChair: Ms. Susana Roel, Port Authority of A Coruña, Spain

10 Heritage preservation, the Chilean experience in its 175th anniversary *Mr. James Crawford. Directorate General Maritime Territory and Merchant Marine, Chile* 

44 Design and set up of a website about lighthouses of the Balearic Islands Mr. Jorge Martín. Port Authority of Balearic Islands, Spain

53 Integrated lighthouse value indicator Mr. Juan Francisco Rebollo. Puertos del Estado, Spain

7355 The Use of Otter Shutters in the Northwest Coast of Spain and the national plan and study of the characteristics and inventory for preservation of historic lighthouses

*Ms. Marisa Marco (Speaker). Port Authority of Vilagarcía, Spain Mr. José Carlos Díez. Puertos del Estado, Spain* 

575864 Tower of Hércules. Past, present and future Ms. Ana Goy, Ms. Dulcemaría Trigo, Mr. Juan Manuel Doce, Mr. Juan Mario Crecente (Speaker). Spain

62 Model for identification of complementary uses in lighthouses Mr. Gervasio Dopico. Port Authority of Ferrol-San Cibrao. Spain

68 Lighthouses and their link to their immediate environment Mr. Eduardo Blanco. Head of the Department of Fishing and Estate Management. Port Authority of A Coruña, Spain

106 Issues and Innovation in remediation of concrete AtoN structures-including case studies for Hydrographers Passage AtoN structures and historic Cape Don Lighthouse

Mr. Greg Hansen. Australian Maritime Safety Authority, Australia Speaker: David Jeffkins. Australian Maritime Safety Authority, Australia

111 "Mapping our maritime heritage" A method for the documentation and presentation of maritime heritage, reaching it's audience through phones, pads and PC/Mac's

Mr. Jo Van der Eynden, Mr. Jan Robert Jore. Norwegian Lighthouse Museum, Norway Speaker: Kristi Slotsvik. Norwegian Coastal Administration, Norway

119 Analysis on protection of historical lighthouses in China Mr. Zhang Fangshun (Speaker), Mr. Xu Ming, Mr. Li Dan, Mr. Xu Shanlei. Shanghai Maritime Safety Administration, China

- <u>11.00-11.30</u> *Coffee: Exhibition areas*
- <u>11.30-12.30</u> Conclusions and venue next 19th IALA Conference 2018-Republic of Korea
- 12.30-14.00 Lunch: Palexco ground floor
- 14.00-15.30 General Assembly 2 (elections) and (during the time for results) venue IALA VTS Symposiúm 2016-Malaysia
- 15.30-16.30 58th IALA Council session



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Mahesh is a Master Mariner (Class 1) and has served on ocean-going cargo ships for over fourteen years. He has a Master's degree in Business Administration from the University of Canberra. Mahesh is an Associate Fellow of the Royal Institute of Navigation UK and a Member of the Nautical Institute.

Mahesh leads the development of policies and practices that enhance the safety of navigation in Australian waters. This includes contributing to enhance the effectiveness of AMSA's aids to navigation network through policy and planning initiatives. He also represents AMSA at various national and international marine navigation safety forums.

From 2006 to 2008, Mahesh worked as the Technical Coordination Manager at IALA, the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA, located in France). There, he was responsible for coordinating the work of the various committees and representing the association in a technical capacity. He was also the Secretary to all of IALA's technical committees.

Prior to 2006, Mahesh worked with AMSA for twelve years, and contributed to the development and implementation of policies relating to the safe navigation of ships in Australian waters. His focus was on new technologies such as Automatic Identification System (AIS).

More recently, he has been involved in a review of the maritime safety and environment protection measures in the north-west region of Australia and the north-east shipping management plan. Mahesh is the recipient of an Australia Day achievement award in 2004 and the AMSA Chairman's Award in 2011.

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Mr. Jesper Bäckstedt is a system engineer/project manager at the business area Construction and Engineering at the Swedish Maritime Administration. He is manager for the Swedish DGPS system since 2012 and is currently working with modernizing the system. He received the degree of MSc in Computer Science from the University of Linkoeping in 1998. He has had various positions within the aerospace industry before joining Swedish Maritime Administration in 2012. He is also a member of the board for the Swedish Radionavigeringsnämden (RNN).

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Operational manager in Sprint S.A. Responsible for maritime related projects. Engineer and project manager in many projects (IT, TELECOM, CCTV, surveillance and low voltage systems). In the past 19 years job carrier Project Manager in many ICT integration projects. In Sprint responsible also for personnel and quality management systems (ISO 9001:2000, AQAP 2110:2003, AQAP 2210:2003 and Internal Compliance Program and Turnover Management System).

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Mr. Roger Barker joined the UK Merchant Navy as a Deck Cadet at the age of 16, progressing through the ranks to finally serve as Master. Most of his career was working on roll on/roll off vessels on the Northern Europe trades into the Baltic which gave him a fundamental background in high density shipping as a day job. Having sailed with the same UK shipping company for some 28 years he came ashore as Marine Superintendent in 2000 and was closely involved with the build and bringing into service of 6 Roll on Roll off vessels fitted with the latest integrated bridge systems. In 2005 he joined Trinity House London as Navigation Manager, taking over as Director of Navigational Requirements in 2009. He is closely involved with many aspects of IALA work including being chairman of WG 1 with ANM (ARM) and a member of the IWRAP Steering Group.

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Mr. Yves-Marie Blanchard is a civil engineer, with a degree in mathematics, a degree in science, and a master degree in civil engineering.

He worked for three years as a database administrator in french maritime authorities.

After which he came in 2011 at CETMEF to work as a specialist in the field of optics of lighthouses and beacons for two years.

Since 2013, he has been the chief of the "equipment" service in the CETMEF and now the CEREMA which focuses in energy, automation, and optical signal in the field of aid to navigation.

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Mr. Ernst Bolt studied Maritime Technology at the Delft UT where he graduated in 1985. After that he worked at Delft Hydraulics on various research projects related to ship manoeuvring, shipping safety and mathematical modelling. In 2000 he started work at the Shipping and Transport division of Rijkswaterstaat, Ministry of Infrastructure and the Environment. His area is the development of mathematical models to support waterway design and traffic management and advising on traffic efficiency and safety. Since 2012 he is a member of IALA ANM Committee.

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Since 2004 Mr. Gerry Brine has been the Manager, Aids to Navigation at the Australian Maritime Safety Authority. He joined AMSA after a lengthy career with various Australian Government agencies including management roles covering major project and contract management, strategic planning and financial management. Gerry has participated in the IALA Aids to Navigation Management Committee since 2006 and has chaired that Committee's Continuous Improvement Working Group since 2010.

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### BIOGRAPHY

Mr. Anders Brödje is a Senior Research Coordinator at the Swedish Maritime Administration, where he is involved in several research and development projects, among others the pan-European Accseas project and the MONALISA 2.0 project. Parallel to this, he is also an active researcher at Chalmers University of Technology, Sweden. His main area of research is Human Factors-aspects of VTS, focusing primarily on expertise and the training of VTS-operators.

Mr Brodje has previously served with the Swedish Maritime Administration as Assistant Maritime District Manager as well as VTS Manager. Prior to joining the Swedish Maritime Administration he served as Commissioned Officer in the Royal Swedish Navy holding various onboard positions within the 4th Mine Warfare Flotilla and since leaving active duty he now serves as LtCdr in the Naval Reserve. He holds a Licentiate of Philosophy in Maritime Human Factors, a BSc in Nautical Science and is a Master Mariner.

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Mr. Carlos Calvo is doctor in philosophy from the Complutense University of Madrid was born in 1956.

I started to work in the field of Aids to Navigation 1n 1992 in Canary Island, working in the maintenance team of the 6 major lighthouses and the buoys and beacons of Las Palmas harbour.

Two years later I moved to the Port of Santander Aids to Navigation Department until today.

In 2005 I was part of the experts team in the European Twining Project called "Improvement of Maritime Safety in Ports and Costal Areas in Turkey".

From 2003 to 2009 I was member of the EEP Committee of IALA as part of the Spanish delegation of Puertos del Estado.

Since 1994 I am responsible with two other colleagues for the technical maintenance, design and constant technological renewal of Aids to Navigation of Santander Port.

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In 1986 I joined the AtoN Service (Cuerpo técnico de Señales Marítimas) and was appointed to the Coast Service of Tarragona. Along my career I served as AtoN technician at the DECA Station in Noia, manager of the Port of Tarragona AtoN Office, and AtoN technician in charge in the lighthouses of Palamós and I. Medes (Girona)

In 1993 I joined the Barcelona Port Authority as supervisor of the AtoN service in Girona and since 2002 I am manager of the AtoN Office of Barcelona Port Authority.

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CHEN Jinbiao Professor. Merchant Marine College Shanghai Maritime University, China

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Mr. Jinbiao Chen, male, was born in 1965 in Shanghai of China. He graduated from Dalian Maritime University in 1985, then, worked for Shanghai Maritime University till now. June in 1995, he obtained his master degree of engineering from Shanghai Maritime University with the major of Navigation Technology. During this period, he also worked on board, holding A-class captain competency certificate for unlimited navigation area. Now, he is an associate professor in Shanghai Maritime University, teaching Ship Handling, Ship Structures and Equipment for undergraduates and Fairway Design for postgraduates, etc, and also, he is one of the heads of the navigation simulation field of the Shanghai Leading Academic Discipline "Vehicle Operation Engineering". His main scientific research achievements include Ship Handling Simulator System, Desktop Multiple Navigation Simulation System and Networked Marine Radar Simulation System, etc. In recent three years, he participated in 2 national level research projects, 3 provincial projects, and, he has published over 20 papers in his field.

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Ms. Chen Tingting, female, was born in 1987 in Anhui Province of China. In 2008, she attended Merchant Marine College of Shanghai Maritime University for her master degree of engineering with the major of Traffic Information Engineering and Control. Then, in 2010, after receiving her master's, she became a PHD candidate in Merchant Marine College of Shanghai Maritime University. Her main study field covers intelligent navigation, navigation safety assessment and navigation-aid system engineering. During these years, she has participated in several projects related to port and fairway navigation safety and navigation-aid system development and navigation-aid system's efficacy evaluation, and has published several articles in the related field.

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In 2001 he became Product Manager for Nauticast Ship Navigation Systems and worked on ship born AIS transponders for the maritime global market.

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Mr. Ugur Karabay is Ocean Going Master Mariner who had serviced in LPG, Afra-max and Suezmax Crude Oil tankers in master position for two years after five years sea services in all officer ranks. After that, work as VTS (Vessel Traffic Services) Supervisor for two years and VTS operator four years in Bosporus / Istanbul Strait, Turkey in Directorate General of Coastal Safety (DGCS). I was IALA (International Association of Marine Aids to Navigation and Lighthouse Authorities) Councilor on behalf of Turkey and IALA VTS Committee Member for three years. I am PIANC (Permanent International Association of Navigation Congresses) In-com Committee Member. I am still master of Oil Recovery Vessel Seyit Onbası which was owned by DGCS. And also I had been voluntary lecturer one day a week for navigation and electronic navigation lessons in two different maritime faculties in Istanbul for four years.

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# CARRIER SUMMARY

2013-2014 DGCS – Head of Maritime Services Department – ORV Seyit Onbasi – Master
2006 – 2013 DGCS – Istanbul VTS Center – Bosphorus VTS Supervisor and Operator
2004 - 2006 DITAS Marine Operations and Tanker Management Co. – M/T Cumhuriyet - Master
/ Chief Officer
2003 - 2004: Military Service in Turkish Navy (Navigation Officer)
2002 - 2003 GUNGEN Maritime & Trading Corporation - M/T Ottoman Nobility / Dignity – Chief
Officer

2000 - 2002 TEEKAY Shipping Incorporated - M/T Koyagi Spirit / Hamane Spirit - Deck Officer 1999 - 2000 BESIKTAS Shipping Incorporated – M/T Beşiktaş and Salih Kalkavan – Deck Officer

#### ACADEMIC QUALIFICATIONS

Istanbul University, Marine Science Institute - Marine Environment Department Post Graduate (Thesis : "A Presumptive Q-Max LNG Tanker Marine Accident's Risks in Bosphorus / Istanbul Strait" )

Istanbul Technical University – Maritime Faculty. Department of Maritime Transport and Management. Graduation : 2000 Graduation Average: 3.34 / 4.00

Istanbul Technical University College of Technology. Deck Department Graduation : 1997 Graduation Average: 3.55 / 4.00

# SKILLS

Computer and Language Skills MS-Office and Applications and web applications MPM, Rust Maximo (Planned Maintenance Program ) MSK (Spare Parts Program ) Advanced level written and spoken English Intermediate level written and spoken Spanish

Personal Skills:

Research in philosophy and psychology fields, reading, research in maritime professional vision developer innovations and new technologies fields, follow up all maritime professional new regulations and procedures, computer and travelling are my interest fields. Non-smoker.

Certificates:

Bosphorus / Istanbul Strait VTS Supervisor and VTS Operator Certificates Ocean Going Master Mariner Competency All necessary STCW and Professional courses certificates GOC (GMDSS) Radio Communication Certificate

# ACHIEVEMENTS

2014 IALA Conference Speaker on "Sea Peril Management and Role of Vessel Traffic Services." 2013 11TH TRANSPORTATION FORUM - Intermodal Transportation and Energy Pipe Lines Working Group Member, Republic Of Turkey Ministry of Transport Maritime and Communication 2013 International Bunker Conference Speaker on "Improving Navigational Safety for Bunker Vessels in Congested Waterways."

2013 PIANC Annual General Assembly Speaker on "Navigational Safety and Statistics of Turkish Straits."

2013 MEDITERANEAN SEASPILL Seminar Speaker on "LNG Tankers Risk Management on Environment and Community."

2012 IALA 12TH INTERNATIONAL VTS Symposium Steering Committee Vice-Chair

2012 IALA VTS Symposium Speaker on "Fatigue and Stress Management for VTS operator"

2011-2008 MERMAID International Maritime Students Conference Speaker on "Maritime Education and IMO Model Courses."

2009 10TH TRANSPORTAIO N FORUM- Intermodal Transportation and Energy Pipe Lines Working Group Member, Republic Of Turkey Ministry of Transport Maritime and Communication



KAUTZ William Telecommunications manager. U.S. Coast Guard, USA

# BIOGRAPHY

Mr. William (Bill) Kautz joined the United States Navy in 1978 and served 20 years as a Chief Radioman. He is a graduate of the College of Southern Maryland with a degree in Information Technology Services. Currently, he is a Telecommunications Manager and Radio Spectrum Manager on the staff of the Commandant of the United States Coast Guard in Washington D.C. He is the Vice Chair of the e-Navigation Committee's AIS and Communications Working Group and the IALA Rapporteur to the International Telecommunications Union's (ITU) Working Party 5B. He will Chair the e-Navigation Committee's Communications Working Group during the 2014-2018 work session.

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LAST David Strategic advisor to the GLAs. The General Lighthouse Authorities of the United Kingdom and Ireland

## BIOGRAPHY

Professor David Last is a Strategic Advisor to the General Lighthouse Authorities of the UK and Ireland. He is a Past-President of the Royal Institute of Navigation. A Professor Emeritus in the University of Bangor, Wales, he works as a Consultant and Expert Witness on radionavigation and communications systems for companies, governmental, international and legal organisations. He is an instrument-rated pilot and practising navigator.

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LEHN- SCHIOLER Tue Senior consultant. Rambøll, Denmark

## BIOGRAPHY

Mr. Tue Lehn-Schiøler is a specialist in statistics and advanced data analysis, an expertise that is founded in his master studies at the Technical University of Denmark (DTU) and studies at the National Aerospace Laboratory of Japan and the subsequent PhD and postdoctoral research at DTU and the University of Florida.

After leaving the academic environment Tue Lehn-Schiøler founded a statistical consultancy company serving international clients in industries such as transport, finance and medico. In his current position at Rambøll Tue Lehn-Schiøler uses his statistical knowledge to analyse navigational conditions and improve the navigational safety in relation to large offshore infrastructure projects.

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LEMON Nick Manager Nautical and Regulation. Australian Maritime Safety Authority, Australia

#### BIOGRAPHY

Mr. Nick Lemon joined AMSA in early 2003 and has worked in the areas of aids to navigation provision, nautical advice and policy, and with AMSA's delegated legislation known as Marine Orders. Nick attends relevant technical meetings of the International Maritime Organization and the International Association of Marine Aids to Navigation and Lighthouse Authorities representing AMSA on safety of navigation matters.

Nick's previous career was as a seaman officer and hydrographic surveyor in the Royal Australian Navy. Highlights from his time in the navy include an exchange posting with the Royal Navy working on survey ships around the British Isles and three years in command of an Australian Navy survey ship. Nick also spent several years at the Australian Hydrographic Office in survey planning, operations and management roles.

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LE PODER Thierry Technician at data processing unit. CEREMA, France

### BIOGRAPHY

Mr. Thierry Le Poder is a senior technician working in the Information Processing Unit at DTecEMF, Cerema, France. Qualified in communication technologies (VHF, MHF, Radio-relay), his expertise is mostly focused on the radiocommunication means used in the French MRCCs, between the center and the shore stations, and between the shore stations and the ships.

Co-author of Best Practices No.: 8

LIU Jiahua Vice Director. Donghai Navigation Safety Administration of Ministry of the P.R.China

### BIOGRAPHY

Mr. Jiahua Liu has been working with Shanghai Aids to Navigation Department and Donghai Navigation Safety Administration of Ministry for more than 33 years. He is Director of the Shanghai Aids to Navigation Department in 2000. He has devoted himself to aids to navigation development and its technology update in Eastern China Sea area and has made a lot of achievements. With his research team, he carried out more than 10 projects research regarding aids to navigation and four of them have got award for science and technology given by the institute of navigation of China.

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LOPEZ Marcos GMV Sistemas, Spain

# BIOGRAPHY

Mr. Marcos López Cabeceira is a professional with 13 years of experience, working in GMV since 2001. Currently, Marcos is Head of the Maritime Section in GMV, managing and working in projects in the areas of AIS/VTS/DGNSS/AtoN, e-Navigation networks, Port management and Multimodal transport, European and International Maritime Safety consultancy and tools. Business Development, Team working and Project Management support are some of his key expertise. Marcos has attended the following trainings/programmes: PMI Project Management Professional (PMP)® course (2014), Master in Terminal Management by the Lloyds Maritime Academy, UK. (2011), Expert in Maritime Traffic and Port Management by the University of Madrid (2008), Master in Electronics Engineering by the University of Valladolid, Spain.(2001) and Master in Physics (M. Sc.) by the University of Valladolid (1999). Marcos is currently participating in European Key organizations playing a role of industrial member as IALA e-Navigation Committee e-Maritime expert for MESA European Commission.

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LU Yongqiang Vice Director. Aids to Navigation Department, Donghai Navigation Safety Administration of Ministry of the P.R. China

### BIOGRAPHY

Mr. Yongqiang Lu has involved in AtoN management for more than 22 years and made a lot of achievements such as long-term plan, standard, specification etc.. He has been a delegate of IALA ANM/EEP/IALA-NET committee since 2002. He participated in the organizing of IALA Shanghai 2006 Conference, and also acted as vice-chair the 2006 and 2010 Conference. He acted as secretary for IALA president during 2006-2010. He pushed forward the Emergency Wreck Marking Buoy international Standard and was appointed by IALA as the Rapporteur of Emergency Wreck Marking Buoy.

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MARCO Marisa Works, maintenance and AtoN manager. Port Authority of Vilagarcia, Spain

### BIOGRAPHY

Ms. Marisa Marco was born in Castellón de la Plana (Spain) in 1973. She graduated with a Master of Science in Civil Engineering at the Universidad Politécnica de Valencia. Her first job was in Castellón Port Authority. Later she started working for the private enterprise, where she was Director of Technical Department in Grupo Franco Obras y Proyectos, a Spain-based company dedicated to infrastructure maintenance. As a result of the company plans to expand its activity, she moved to Panamá, where she worked as manager director for Latin America.

At the moment, she is in charge of Infrastructures and Planning Department in Vilagarcía de Arousa Port Authority, and among her responsibilities, it is the management of ATON.

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MARPEGAN Mariano Technical Department Manager. HIDROVÍA SA, Argentina

#### BIOGRAPHY

#### Mr. Mariano Marpegan

DEGREE: Civil Engineer (2000) La Plata National University, Argentina; Specialist in Port Engineering (2012) University of Buenos Aires, Argentina

SPECIALIZATION: Aids to Navigation

PROFFESIONAL ACTIVITIES: Since 2005 Technical Department Manager of HIDROVIA SA in charge of:

• Integral co-ordination of the maintenance of Aids to Navigation in a stretch of 1500 Km in the main waterway of Argentina

• Supervision bathymetric surveys in the Parana River

• Implementation and operation of a hydrometric network with 36 remote stations INTERNATIONAL ASSOCIATIONS: Since 2011 Member of the IALA EEP Committee

#### COURSES AND SEMINARS

2001 – Bidimensional 2D Modelling with DHI Mike 21 Software

2002 – General dredging Course – TID -. IHC – Kinderdijk – The Netherlands

2003 – Third Inland Navigation Seminar – Sobena - Corumba – Brazil

2003 – Promodel Simulation Processes Course – San Paolo – Brazil

2003 – AIS for Aton Seminar – Royal Institute of Navigation - London

2005 – Fouth Inland Navigation Seminar – Sobena – Belem do Para – Brazil

2007 – International Seminar of dredging and environment – WEDA – Rio de Janeiro – Brazil

2008 – International Seminar on inland ports and waterways – Iquitos - Peru

PUBLICATIONS

Published

• IALA Magazine (2012) – Implementation of an AIS AtoN in Argentine Antartic

To be published

• IALA Magazine (2014) Implementation of antifouling paints in AtoN and Maritime structures .

• Colaboration with the redaction of IALA Guideline on Prevention and protection of AtoN systems against vandalic actions

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MARTÍN SANTO DOMINGO Javier Deputy Director Aids to Navigation. Puertos del Estado, Spain

# BIOGRAPHY

Mr. Javier Martín received his degree in Civil Engineer in 1989, and a Master in European Union in 1993 in Madrid Politechnical University. In 1998, he received his Master in Ports Management and Intermodal Transport in Comillas University. From 1889 to 1992 he worked as Maritime Projects Manager for "Dragados y Constructiones". From 1992-1994, He was the Civil Works Manager for "Vias, SATO". He started his work in Puertos del Estados in 1994: 1994-1998 as Project Design Head of Department, 1998-2001 Director of Port Authority of Vilagarcia, 2001-2004: Ports Services Head of Department, 2004-2013: Deputy Director Port Operations and AtoN and since 2013, Deputy Director Aids to Navigation Department.

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MARTÍN Jorge Head of Quality and Innovation. Port Authority of Balearic Islands, Spain

# BIOGRAPHY

Mr. Jorge Martín is currently the Head of Quality and Innovation (since November 2013) of the Balearic Islands Port Authority.

Have played (from 15 October 2012 until November 2013) as Chief Operating, Services and Territory Baleares Port Authority as Head of Department.

He has held the post of Head of Projects and Works Department of the Port Authority of the Balearic Islands

He has held the post of Head of Department of Port and Coastal Infrastructure Management and Environmental Techniques Gathered. (January 2007 to December 2007)

He has held the position of Area Manager Port Services Public State Ports Agency (from April 2005 to January 2007)

He has held the post of Head of Projects and Works Department of the Port Authority of the Balearic Islands (from January 2004 to April 2005), being responsible for the investment of the Port Authority: 24 M € in 2004 and Director of all the works to be executed in that period.

He has played in the Balearic Islands Port Authority as Head of the ports of Ibiza and Formentera (from July 1998 to December 2003)

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MARTÍNEZ Antonio Project Manager. Mediterraneo Señales Maritimas S.L.L, Spain

## BIOGRAPHY

With an Electronics Engineering background, Mr. Antonio Martínez started his career in the world of Marine Aids to Navigation in 1989. He gained his expertise thanks to hundreds lighthouses installations and repairs, port and harbour beaconing, buoy deployments, beacon electronic circuit designs, production supervising ,maintenance and training programs throughout more than 16 years. Expert in site surveys, his tireless passion for lighthouses has made him sail along the coasts of Spain, China, Vietnam, Indonesia, Philippines, Angola, Cape Verde, Venezuela and Ecuador among others. As founding partner, in 2006, he brought to MSM a wealth of experience from project management to international customer service, and ingenious creativity and a fighting spirit.

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MILLET Alec Nautical and Hydrographic Advisor. Australian Maritime Safety Authority, Australia

#### BIOGRAPHY

Mr. Alec Millet joined AMSA in June 2013 from the Port of Fremantle where he was the Deputy Harbour Master and Manager Marine Operations. His responsibilities included the safety of commercial shipping navigation, management of Vessel Traffic Services, management of pilotage requirements and pilot transfer services, buoyage configuration (including floating, fixed and AIS services), incident response, daily stakeholder/Agent/customer management and the supervision and configuration of the Port's real-time under keel clearance (UKC) management system.

With almost 30 years in the greater maritime domain, Alec has been engaged by a number of prominent private sector, government and government trading enterprises including the Royal Australian Navy as a seaman officer, GeoVision Australia, Ports Corp SA and SAAB Systems. Through this extensive experience, Alec's role at AMSA is to provide specialist advice on the safe navigation of commercial shipping and related aids to navigation, guidance to the exploration and off-shore/petroleum industry, assisting in the design of shipping traffic management regimes and identifying associated hydrographic issues. Alec is also involved in AMSA's e-navigation initiative and to investigate related maritime developments including the emergent area of Marine Spatial Planning (MSP) and adapting mainstream Geographic Information System (GIS) technology to the specialised maritime environment.

Alec has formal qualifications in management, maritime operations, business planning and hydrographic surveying. He is a member of a number of principal professional organisations including the International Harbour Masters Association and Australian Institute of Company Directors. He is also the regional Director of the International Federation of Hydrographic Societies.

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Co-author of paper No.: 103

#### BIOGRAPHY

Mr. Jan Młotkowski is Eng., Deputy Director in the Maritime Office in Gdynia, Poland.

Coordinator of the Polish National Maritime Safety System project. Since 1993 employed in the Polish maritime administration, initially in Hydrographic Office, as a specialist and senior specialist in the Department of Marine Hydrography, then in Maritime Traffic Department as a manager in Marine Safety Information Exchange Center.

Over 15 years experience related to maritime safety monitoring. He was involved in the in the Gulf of Gdansk VTS (2000 – 2003) project. Since 2009 he is responsible for the Aids to Navigation, technical maintenance and development of IT, radionavigation and maritime monitoring systems in the Maritime Office in Gdynia.

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MUELLER Paul F Senior Engineer. Tideland Signal Corporation, USA

# BIOGRAPHY

Mr Paul F Mueller have a Bachelor's of Arts degree in Physics from Ithaca College in Ithaca, New York, USA. I have over thirty-five years of experience designing software and hardware for industrial data acquisition and control (SCADA). For the last twenty-three years I have worked for Tideland Signal Corporation.

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NICHOLSON Malcolm Principal Development Engineer. General Lighthouse Authorities, United Kingdom and Ireland

# BIOGRAPHY

Mr. Malcolm Nicholson is the Principal Development Engineer for research, development and engineering support in all aspects of visual signalling within the General Lighthouse Authorities (GLA) of the UK and Irelands Research and Radionavigation Directorate. He leads a small team of engineers and is responsible for quality, management, finance and technical standards. He runs two photometric (light measurement) laboratories in line with ISO 17025 to provide quality assurance, performance of new light sources and testing of in house developments. He is also responsible for the delivery of an annual portfolio of varied engineering. He represents the GLA at National and International level and is presently the Chairman of Working Group 4 (light and vision) in the Engineering Committee (EEP) of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) and a registered IALA World Wide Academy Expert. He also acts as Liaison Officer between IALA and the Commission Internationale d'Eclairage (CIE) on lighting matters.

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Author/Speaker of papers No.: 84 & 86 Author of paper No.: 88 NOGUCHI Hideki Director for Coordination of International Cooperation. Administration and Planning Division, Maritime Traffic Department, Japan Coast Guard, Japan

#### BIOGRAPHY

Cdr. Hideki Noguchi is the Director for Coordination of International Cooperation, Administration and Planning Division, Maritime Traffic Department, Japan Coast Guard. He is currently assigned as the Vice-chair of IALA ENAV Committee and was the Coordinator of IMO NAV Sub-Committee Correspondence Group on Development of IMO Policy and New Symbols for AIS Aids to Navigation (AIS AtoN) from 2011 to 2013. He is the representative of Japanese delegation to IMO MSC, NAV and COMSAR and the member of various IALA Committees.

He graduated the Aids to Navigation Course of the Japan Coast Guard School in 1980. He was chosen to the Japanese Government Short-term Fellowship Program Student in 1994 and sent to the United States Coast Guard for 6 months to study floating aids management. In 2005, he was dispatched to Philippine Coast Guard as the expert on SAR and AtoN of the Human Resource Development Project by Japan International Cooperation Agency for 2 years.

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### BIOGRAPHY

Mr. Magnus Nyberg received his Master of Science from the KTH Royal Institute of Technology. He first started to work with AIS development and AIS standardization in 1997 for the GP&C Sweden AB, a subsidiary of the Swedish Space Corporation that later became part of SAAB Transponder Tech in 2004. There he worked as the Product Manager for the development of the R3/R30 and R4/R40 AIS platforms. He left SAAB in 2004 ti start with True Heading AB, where he developed various AIS products and performed consultancy services. He joined Pharos Marine Automatic Power Inc. in 2011, where he took part in the AIS AtoN development for the ATONIS products lines and AIS analyzing software tools. One of the early experts in AIS, Magnus decided to take on new challenges and in 2013 jojned the technology company Solace Power to begin a new. Career in the Wireless Power Transfer through resonant electrical field technology.



## BIOGRAPHY

Mr. Geir Lyngheim Olsen came onboard with Jeppesen in 2011, bringing with him a solid educational background, a wealth of training and practical life experience gained through 11 years of serving vessels at sea. Included in this time were seven years as a seaman and officer on Search and Rescue and offshore vessels (Anchor Handling Tug Supply and Subsea), including two years operating in the volatile maritime regions of Nigeria, Ghana and Angola.

In his current position as Product Manager, Marine in Jeppesen's Stavanger/Egersund, Norway office, Olsen has specialized in the area of voyage, operations and disruption planning solutions. Olsen was instrumental in the Singapore Marine Electronic Highway "S100" sea trials, has served as a delegate and speaker on e-navigation to the International Maritime Organization (IMO) and International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), and has had several articles published in leading maritime journals.

Olsen's prior experience also includes working as a Marine Logistics Coordinator for ConocoPhillips, providing fleet wide marine operations and logistics management in the company's Onshore Logistics Center.

Olsen's educational background includes a Masters Degree in philosophy and ethics from the University of Bergen and a Bachelors Degree in nautical science from Stord/Haugesund University College specializing in offshore technology and project management.



OLTMANN Jan Hendrik Senior Strategic Adviser, Deputy Head Traffic Technology and Telematics Division. German Federal Waterways and Shipping Administration, Germany

### BIOGRAPHY

Mr. Jan-Hendrik Oltmann born in 1965 in Frankfurt, Germany, he received his master degree (Dipl.-Ing) in Electrical Engineering from Darmstadt Technical University, Germany in 1992. He joined the Aids to Navigation Research and Development Center of the administration in Koblenz in 1993. There, he started to work on radio navigation in general and the application of transponder technology to VTS. In 1999, he joined the Traffic Technology and Telematics Division, Kiel and Aurich. Since 1194, J H Oltmann has been involved in the development of the AIS and terrestrial radio navigation services. He has been managing several domestic and international projects, chairing several international groups. Since 2007, he is Chair of the Architecture Technical Working Group of the IALA E-Navigation Committee. In that capacity, he contributed to the development of the overarching E-Navigation architecture at IMO and to the development of the concept of the Common Maritime Data Structure (CMDS).

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**OPPERMANN Ralf** Sales Director. Schnoor Industrieelektronik GmbH & Co. KG, Germany

### BIOGRAPHY

Mr. Ralf Oppermann earned his degree in electrical engineering, telecommunications discipline, at the Hamburg University. He began working as a project engineer for a system company in the area of communication and navigation systems onboard ships. Subsequently he worked in different positions with major manufacturers of telecommunication equipment and systems with the focus on wireless communications. He is currently sales director with Schnoor Industrieelektronik looking after the international business of the company.

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PALMETZHOFER Gerd Solution Consultant. Frequentis AG, Austria

# BIOGRAPHY

Mr. Gerd Palmetzhofer started his career in human factors and usability in the middle of the 90ties by designing user interfaces for real time process control systems. Then he switched to the mobile telecommunication industry, where he was responsible for the usability of several service applications.

With the change to Frequentis in 2007 he came into contact with safety-critical control rooms. There he is part of the human factors team being responsible for user interface design, process analysis and human factor testing for public safety and maritime control rooms.

Currently his focus is on developing a new operator working position for public safety control rooms.

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PARK Heinz System Engineer for HF and VHF radio communication. German Federal Waterways and Shipping Administration, Germany

## BIOGRAPHY

Mr. Heinz Park, 43 years old, married, three children, studied telecommunication engineering, worked in telecommunication business, since 2003 working at Federal Waterways and Shipping Administration, Germany

Organization: Central Engineering and Maintenance Office for Maritime Traffic Technology, Wilhelmshaven

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PARK Jaeyang Researcher. Dongseo University, Republic of Korea

BIOGRAPHY

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PARK Suhyun Professor of Dongseo University, Republic of Korea

### BIOGRAPHY

1986 : BS at Pusan National University, Republic of Korea
1988 : MS at Pusan National University, Republic of Korea
1999 : Ph.D at Pusan National University, Republic of Korea
1996 ~ current : Professor of Dongseo University, Republic of Korea
Research Interests : Maritime IT, Artificial Intelligence, Intelligent System

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PASCUAL Ignacio Infrastructures Director. Port Authority of Valencia, Spain

#### BIOGRAPHY

Mr. Ignacio Pascual Navarro became civil Engineer in 1973 and an Architect in 1978. He worked as a freelance architect until 1989. He created and managed a Research institute of construction materials until 1997. He has managed, as a Technical director, a logistic company created by the port authority of Valencia, and is the Infrastructures Director for this Organization since 2005.

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## BIOGRAPHY

Mr. David Patraiko is the Director of Projects for The Nautical Institute, and coordinates its Technical and Professional Development Committees. He is responsible for developing and managing major Institute projects and he represents the professional interests of members in general shipping, training and technical forums.

Much of this work is aimed at assisting members of the Institute with continuous professional development. He has led research and produced many papers and articles on training, electronic navigation, the associated 'Human Element' effects created by technology, and Marine Spatial Planning. He is currently involved with the international debate on e-Navigation and is Chairman of the IALA e-navigation working group for Strategy and Operations, Chaired the Industry ECDIS Training Group, and is Chairman of the Green Awards Board of Experts.

After a brief period as an independent consultant and surveyor, in 1997 he accepted the position as Project Manager for The Nautical Institute, and became Director of Projects in 2003. A graduate of the Massachusetts Maritime Academy (US), he sailed on a variety of international vessels in his twelve years in the Merchant Navy (1985 – 1997). He holds an Unlimited Master Mariners licence, and was awarded an MBA degree from Henley Management College (UK).

The Nautical Institute is the recognised international professional body for qualified mariners and others with an interest in nautical science. Its purpose is to promote high standards of knowledge, qualifications and competence amongst those in control of sea-going craft, both afloat and ashore. The Institute holds Non-Governmental Organisation status at the International Maritime Organization.

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## BIOGRAPHY

Captain Jonathon Pearce joined BP as a cadet in 1979 and qualified as a Master Mariner in 1990. He has served in all ranks, including master, on various types of vessels. In 1994 he took a shore position as pilot in Port Taranaki, New Zealand. In 2006 he returned to the United Kingdom as a risk assessor and undertook numerous formal safety audits at a number of UK ports. He has been involved with LNG risk assessments and is an expert witness on pilotage issues. In 2008 he joined OMC International as their Business Development Manager due to his extensive knowledge of their Dynamic Under-keel Clearance systems. He is a highly knowledgeable on ship motions, under-keel clearance and vessel squat and presents internationally and nationally on these issues. In March 2014, he was inducted into Trinity House as a Younger Brother.

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PEDROSA Juan Luis Director. Spanish Maritime Safety Agency, Spain

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Mr. Juan Luis Pedrosa is the General Director of the Spanish Maritime Safety Agency since January of 2012. Born in Lugo in 1955 and Captain of the Merchant Marine, he was major of the city of Pontevedra from 1995 to 1999. Before he had been Head of the Fisheries in Pontevedra and General Director of Shellfish and Fish Farming in the Xunta de Galicia. In 2003 he was appointed Director of the Maritime and Fishing Professional Training Centre, until 2012 when he became General Director of the Spanish Maritime Safety Agency.

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PELLIZZARI Piero Head Department. Italian Coast Guard – Headquarters, VII Department "ICT and Vessel Traffic Monitoring Systems", Italy

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Rear Admiral (lower half) Piero Pellizzari was born on February 29, 1960. He attended the Italian Naval Academy in Livorno from 1979 to 1983, where he graduated in Maritime and Naval Sciences, then attended the United States Navy flight school, where he got certification as a Naval Aviator.

In 1991, after completing 1800 flight hours, he moved to the Italian Coast Guard.

Since 1996 he has been directly involved in the most relevant Coast Guard projects concerning goods and services supply and updating in the fields of communications, maritime traffic surveillance, radio navigation and new vessel command/control/communication systems.

Rdml. Pellizzari, in his capacity of Chief, Traffic Monitoring and Communication Office, General Headquarters of the Italian Coast Guard, has been involved since the beginning in the activation of both the Italian national AIS system and - in strict coordination with EMSA - of the Mediterranean AIS server for exchange of navigational data among the EU countries of the Mediterranean Sea.

Then, in his current capacity of Head of ICT, Vessel Traffic Monitoring and Radio communications Department at the Italian Coast Guard General Headquarters, has been following outstanding projects in digitalization of port arrival/departure procedures and integration with existing/ developing systems in local port communities and other State agencies, and in the realization of the Italian Single Window referred to in the 2010/65/EU Directive.

His international experience includes service as Italy's national representative at IMO COMSAR and NAV Subcommittees in London, at the IALA VTS Committee in Paris and at the 2006 (Shanghai) and 2010 (Cape Town) Conferences, as well as at the 2008 (in Bergen) and 2012 (in Istanbul) Symposiums. He holds a Baccalaureate degree from the University of Trieste in International and Diplomatic Sciences (Faculty of Political Sciences) and a Master degree in Advanced Security Studies from the University of Perugia.

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#### BIOGRAPHY

Mr. Guojun Peng was born in 1973, Chinese Academy of Sciences postdoctoral, professor .He is deputy director of the Marine Navigation &Pilot Technology Research Centre of Jimei University, deputy director of the Navigation-Aids Technology Research Center of Fujian Province, and deputy director of the Xiamen Maritime traffic information engineering Technology Research Center. Dr Peng has long been engaged in maritime traffic science and technology research and development, navigation safeguard technology research and development, scientific and technological achievements transfer and personnel training. He has conducted the thorough research in the field of navigation technology, pilot technology, Navigation safeguard, etc., and has achieved many results.

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**REBOLLO Juan Francisco** Head of the Spanish Marine Aids to Navigation Service, Spain

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Mr. Juan Francisco Rebollo Born Alcalá de Henares-Madrid, 1953.

Degree in physical sciences, began his professional career as teacher of mathematics and physics (1975-1977), later moving to work in the field of physical oceanography and instrumental meteorology from 1977 to 1993 (companies: Thalas,SA, Tecnoceam,SA and Sea & Swell,SA, being founding and director of the last two).

In 1993 he joined the team of Puertos del Estado, like the Head of the Technical Centre for Maritime Signals, being promoted to Head of the Spanish Marine Aids to Navigation Service in 2001, position he holds today. Over the past 20 years, has developed numerous communications and training activities, as well as manage projects on Marine Aids to Navigation in Spain as DGPS Network, Remote Control System, Platform PORTAL-AtoN, SW-AIS Network and IATONIS Service, has been member of IALA-ANM Committee and representative of Puertos del Estado (Spain) in the IALA Council.

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## BIOGRAPHY

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RODRIGUEZ Álvaro Technical director. Puertos del Estado, Spain

BIOGRAPHY

Mr. Álvaro Rodríguez Dapena, UPPER CIVIL ENGINEER (6 years) PHD Cum Laude Special Award.

CURRENT POSITION: Technical Director of Puertos del Estado. Chairman of the "Comisión de Faros" (Spanish Lighthouse Commission). Member of the Board of Directors of Port Authority of Algeciras and the rail company "Renfe Mercancías".

Seventeen years in Puertos del Estado in different positions: Research and Development Department; Intermodality and Logistics Area. External Affairs Deputy Director. Planning and Development Director, and Technical Director.

Previously, 9 years in TEMA Consulting Group, involved in transport projects and studies.

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Mr. Jan Šafář is a Research & Development Engineer with the Research and Radionavigation Directorate of The General Lighthouse Authorities of the United Kingdom and Ireland. He holds an MEng equivalent degree from the Czech Technical University, Prague and is currently finishing his PhD at the same university. His area of expertise includes GNSS, eLoran, radar and AIS. He is a Member of the Royal Institute of Navigation (RIN) and the U.S. Institute of Navigation (ION).

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Mr. Peter Schneider is 45 years old, married, one child, lives in Emden. Finished high school in 1987, education as radio-electronics technician at "Waterways and Shipping Office Emden" from 1987-1990, worked as electrician in U-boat building (1990 – Thyssen Nordseewerken), studying telecommunication engineering from 1990-1994 at university of applied sciencesEmden-Leer, worked as development engineer and product manager at "ELV Elektronik GmbH. Since 2003 working at Federal Waterways and Shipping Administration (first at expert committee for telecommunication at "Waterways and Shipping Office Emden", since 2009 at "Central Engineering and Maintenance Office for Maritime Traffic Technology")

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SCHUETT Todd Training Manager. Kongsberg Norcontrol IT, Norway

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Since earning a graduate degree from the University of Chicago, Mr. Todd Schuett has traveled throughout the world and visited numerous port and coastal surveillance centers. As the training manager of Kongsberg Norcontrol IT since 2000, he has instructed hundreds of VTS operators from all corners of the earth, as well as developed one of the first interactive online learning solutions for maritime surveillance system operations. Prior to joining Kongsberg Norcontrol IT, Mr. Schuett taught at several universities, including Doshisha University and Ritsumeikan University in Kyoto, Japan. Most recently he has served as Kongsberg's project manager for the EU funded D3CoS project – Designing Dynamic Distributed Cooperative Human Machine Systems – from which was developed the cooperative Path Planner technology described in his paper for the IALA Conference. Todd Schuett is uniquely qualified for this topic, having observed the challenges and diversity in port and coastal VTS operations across the globe. He is a fan of e-Navigation, has been a member of the IALA workgroup on eLearning and is a regular delegate for the IALA V-103 Workshops.

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Mr. Jiwon Seo received his B.S. degree in mechanical engineering (division of aerospace engineering) from KAIST (Korea Advanced Institute of Science and Technology) and received M.S. degrees in aeronautics/astronautics and electrical engineering from Stanford University, Stanford, CA, and a Ph.D. degree in astronautics from Stanford University in 2010. He is currently an Assistant Professor in the School of Integrated Technology at Yonsei University, Korea. His research interests include alternative positioning, navigation, and timing systems such as eLoran; GPS-based intelligent transportation systems; and intelligent unmanned systems. Professor Seo is a member of the eLoran Advisory Committee of the Ministry of Oceans and Fisheries, Korea.



SIERRA ALMAGUER Julio Fidel Chief of Aids to Navigation Operations, Geocuba. Hydrographic and Geodetic Service, Cuba

## BIOGRAPHY

Mr. Julio Fidel Sierra Almaguer after graduated as an Engineer on Hydrography and Oceanography from Cuban Naval Academy in 1997, joined the Hydrographic and Geodetic Service as Aids to Navigation Specialist for the Entrepreneurial Group Geocuba, being promoted to Chief of the Aids to Navigation Operations Department in 2000. Msc Geomatics 2005, he has contributed to the implementation of the IALA latest applicable technical documents on the Cuban AtoN service, also working as new projects and maintenance operations supervisors. He is a member of the ARM and ENG Committees of IALA

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SLOTSVIK Kirsti Director. Norwegian Coastal Administration, Norway

BIOGRAPHY

Ms. Kirsti Slotsvik is the director of the Norwegian Coastal Administration. The presentation will consist of a 5 minute film presenting the project, and Kirsti Slotsvik has kindly accepted to introduce the film to the audience.

Speaker of paper No.: 111



TANAKA Hiroaki Senior Engineering Officer. Aids to Navigation Engineering Division, Maritime Traffic Department, Japan Coast Guard, Japan

#### BIOGRAPHY

CDR. Hiroaki Tanaka is Senior Engineering Officer, Aids to Navigation Engineering Division, Maritime Traffic Department, Japan Coast Guard. He is in charge of system design and procurement of VTS equipments.

He graduated the Aids to Navigation Course of the Japan Coast Guard School in 1983. He started his career at Nagashima Decca Station and has experienced various positions including the Radio Aids to Navigation Division of the Japan Coast Guard HQ. Before assigned to the present position, he was chief of Aids to Navigation Management Division of the 6th Regional Coast Guard HQ.

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CDR. Kazuyuki Tanaka is Director for Disaster Management of Aids to Navigation, Aids to Navigation Engineering Division, Maritime Traffic Department, Japan Coast Guard. He is in charge of planning the countermeasure against the damage of AtoN system caused by natural disasters such as huge earthquakes and/or huge tsunamis.

After he received master's degree of engineering from the Tokyo University of Science, he joined the JCG in 1996. He was engaged in system design and procurement of Radio Aids and VTS. In 2008, he was dispatched to Directorate General of Sea Transportation, Ministry of Transportation, the Government of Indonesia as an expert on Safety Navigation, Preventing marine Disaster and SAR by the Japan International Cooperation Agency for 3 years.

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Dr. Hazan Terzi is Master Mariner and VTS Supervisor in Turkish Straits Vessel Traffic Service, he holds MSc. and PhD degrees in the field of maritime policy from Istanbul University in Turkey. He studied on the political history of Turkish Straits and is now working on the new VTS projects in Turkey.

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THUMANN Mark System Engineer, Project manager "Traffic Services". German Federal Waterways and Shipping Administration, Germany

## BIOGRAPHY

Mr. Mark Thumann is 46 years old, married, two children

- Education in electronics technician for information and telecommunications systems
- Studying communication technology engineering
- Since 1994 working for the German Federal Waterways and Shipping Administration

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Mr. Enrique Tortosa Telecommunication Technical Engineer; Polytechnic University of Madrid, 1983.

Working for Puertos del Estado since 2005. Current position: Head of Department of Port Services. Among other functions related to port services, is responsible for the Spanish Port AIS Network, and a member of VTS committee of IALA.

From 2000 to 2005 worked in the area of IT for Puertos del Estado as Head of Department of Projects and Innovation.

From 1984 to 2000 worked for Ministry of Public Work and Puertos del Estado as Head of Division of Radio navigation Aids to Navigation. During this period, got wide training and experience in Decca System, Loran-C, Differential Omega and Radiobeacons. Between 1995 and 2000, played a relevant role in the design and development of the Spanish Differential GPS Network.

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#### BIOGRAPHY

Capt. Mustafa Celalettin Uysal is Head of Aids to Navigation Department of the DGCS since 2008, He graduated in Hacettepe University of Ankara. He worked at sea as a Radio Electronic Officer between 1980 -1993. After sea career, he was employed at the Turkish Maritime Organization in 1993.and worked as Chief of section in Aids to Navigation Department between 2004 -2008.

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VAN DER EYNDEN Jo CEO. Lindesnes lighthouse museum, Norway

# BIOGRAPHY

Mr. Jo van der Eynden is the director of Lindesnes Lighthouse Museum, which has an official status as the national lighthouse museum of Norway. He has been attending the IALA working-group on historical lighthouses since 1999, and published several books on maritime history.

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#### BIOGRAPHY

Mr. Jeffrey van Gils has a longstanding experience in maritime and nautical IT matters. He started his career within the Ministry of Infrastructure and the Environment at an operational site in the Southern part of the Netherlands and acted as conceptual and technical project manager. He was involved with and responsible for the development the Inland Tracking System for Inland Waters.

As from the beginning Jeffrey was engaged in the domestic and regional development of AIS, the last 6 years also on international level.

He was one team members responsible for realisation of the Inland AIS network in the Netherlands and acts as an advisor on AIS for the national port authorities and for the Netherlands Coast Guard.

During the last decade he acts as a Senior Advisor for AIS and other technical e-navigation related aspects, both again on national and international level.

Since 2011 Jeffrey has been appointed as the national coordinator on AIS – including slot management, in close cooperation with the national frequency coordinator. In this capacity Jeffrey also coordinates the work on the development of a national policy framework on the technical implementation, the protection and the use of AIS, Application Specific Messages and its relationships with e-navigation and the River Information Services.

Since 2008 he is a member of IALA e-Navigation Committee, where he started in the Architecture working group and later on joined the AIS and COMMS working groups. Jeffrey is also the custodian of the IALA related website www.e-navigation.nl

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Dr. Nick Ward is Research Director of the General Lighthouse Authorities of the UK and Ireland, with responsibility for strategy & planning of research & development. His area of specialisation is in radio-navigation and communications, including Automatic Identification Systems (AIS). He is currently vice chairman of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) e Navigation committee. He is a Chartered Engineer, a Fellow of the Royal Institute of Navigation and a Member of ION.

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Dr. Alwyn I. Williams has been involved with radionavigation research since 1999, covering topics such as Differential GNSS, low-frequency navigation systems and Automatic Identification System (AIS). He was heavily involved with International Electrotechnical Commission (IEC) and IALA with regards to setting international standards for shore-based AIS stations. He is a member of the Institute of Engineering and Technology (IET) and an Associate Member of the Royal Institute of Navigation.

Author/Speaker of paper No.: 8798



WILLIAMS Paul Principal Development Engineer. General Lighthouse Authorities of the United Kingdom and Ireland

#### BIOGRAPHY

Dr. Paul Williams is a Principal Development Engineer with the Research and Radionavigation Directorate of The General Lighthouse Authorities of the UK and Ireland, based at Trinity House in Harwich, England. He is currently the technical lead of the GLA's eLoran Work Programme. The work involves planning the GLA's maritime eLoran trials and work on a wide range of eLoran related projects. He holds BSc and PhD degrees in Electronic Engineering from the University of Wales, is a Chartered Engineer, a Fellow of the Royal Institute of Navigation, and is chairman of the Radio Technical Commission for Maritime Services Special Committee 127 on Standards for Enhanced Loran (eLoran) Systems.

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#### BIOGRAPHY

Mr. Ming Xu has been working at Ningbo Aids to Navigation Department for more than 17 years since he graduated from Dalian Maritime University in 1996. He is a senior engineer . He has devoted himself to aids to navigation administration in the northeastern coastal area of Zhejiang Province. Besides that,, he wrote more than 10 thesises concerned with aids to navigation and published in the main domestice magazines.

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Mr. Xu Shan-lei has been working with Shanghai Maritime Safety Administration for more than 4 years since he graduated from Wuhan University of Technology in July, 2010. He is Master and Assistant Engineer of the Marine Engine Engineering. His master's degree paper "Research on the Methods of Calculation of the New Ship Design CO2 Index" has been quoted widely. He has devoted himself to vessel navigation safety administration. With his research team, he carried out 2 projects regarding vessel navigation safety administration. Besides that, he wrote 4 papers concerned with vessel navigation safety administration and published on the main domestic magazines.

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#### BIOGRAPHY

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#### BIOGRAPHY

Mr. Rolf Zetterberg holds a Master of Science degree in Applied Physics and worked for 20 years with technical development and process control systems in different industrial applications. He joined the Swedish Maritime Administration in 1995 and has since then worked with technical support systems, such as AIS and DGPS, in different positions. Rolf has participated in the IALA Committees for Radionavigation, AIS and eNavigation, the last 4 years as chairman for the Working Group AIS & Communication. Rolf has represented Sweden in IMO NAV and other international organisations.

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**Mr.** Fangshun Zhang was born in 1958. He worked at the Ningbo Aids to Navigation Department from 1983 till now. He graduated form Hangzhou University in 1991. From 2001 to 2004, he also qualified a law degree in Dalian Naval Academy .Since he joined in this unit , he worked hard and made a lot of achievements .In 2003, he became the director of the unit and has been in this position for about 12 years. With his work team, the unit was the biggest aids to navigation department in China. The number of aids to navigation was more than 1000. Besides, He has made a lot of research about the technology of aids to navigation ,such as the research of new material to aids to navigation .The research made great use to the navigation science and Mr. Zhang got the third prize of Scientific and technological progress. Besides, he has wrote about 10 thesises about this area and has been published in the main domestice magazines.

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# IALA GENERAL ASSEMBLY



16:30-18.00 GENERAL ASSEMBLY SESSION 1 Arao Auditorium

MAY 31 . SATURDAY

14:00-15.30

MINE STREET 

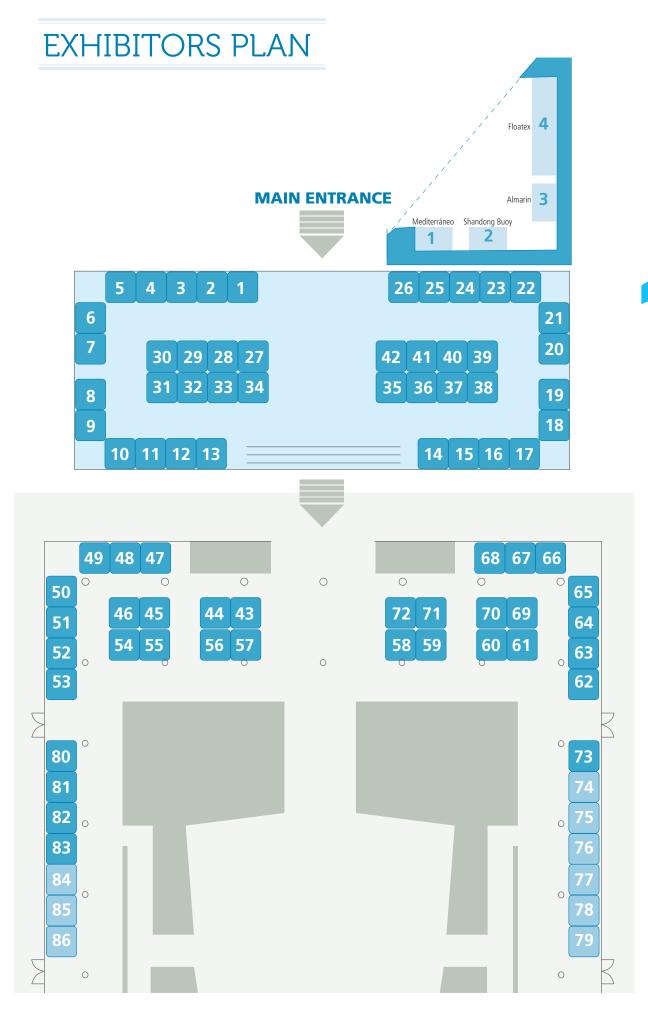
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**GENERAL ASSEMBLY SESSION 2** Election of the new Council Arao Auditorium

# IALA-IMC EXHIBITION

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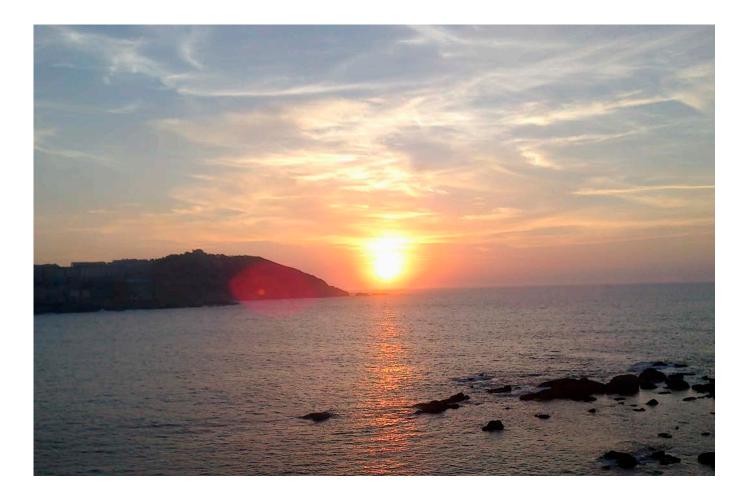
#### COMPANY NAME STAND NO.

52 & 53 ALMARIN (external space 3) AUSTRALIAN MARITIME SYSTEMS Ltd 28 & 29 Beijing Catonglobal Technology 18 Carmanah - Sabik Oy 45, 46, 54 & 55 80 CHAOHU YINHUAN NAVIGATION AIDS Ltd 25 DENBRIDGE MARINE Ltd 73 Elman exactEarth Ltd 36 5 (external space 4) Floatex GateHouse 21 67 & 68 Gisman GRUPO MECÁNICA DEL VUELO SISTEMAS SAU 40 iDeal Teknoloji Bilisim Cozumleri A.S. 37 INDRA 19 Japan Radio 10 & 11 81 JFC Manufacturing Co Ltd JOTRON AS 2 66 **KELVIN HUGHES** Kongsberg Norcontrol IT AS 6&7 27 & 34 LA MAQUINISTA VALENCIANA 38 McMurdo Group 43, 44, 56 & 57 Mediterráneo Señales Maritimas S.L.L. (external space 1) MOBILIS 47, 48 & 4920 NAVIELEKTRO 20

COMPANY NAME STAND NO. 9 **OMC** International Pharos Marine Automatic Power 12 & 13 PINTSCH ABEN B.V. 14 Saab TransponderTech AB 82 & 83 Sabik Oy - Carmanah 45, 46, 54 & 55 SCHNOOR Industrieelektronik 62, 63, 64 & 65 GmbH & Co. KG 1 SeaHow Sealite Pty Ltd 60, 61,69 & 70 SELEX ES 17 Shandong Buoy&Pipe Industry Co., Ltd 26 (external space 2) Shanghai Rokem Industrial Co Ltd 3&4 Signalis 22, 23 & 24 SRT 8 31 TERMA A/S TIDELAND SIGNAL 58, 59, 71 & 72 TOKYO KEIKI INC. 39 15 & 16 Transas Marine International TRIMBLE 41 Vega Industries Ltd 32 & 33 Wealth Marine Pte Ltd 30 Woori Marine Co., Ltd. 50 & 51 ZENI LITE BUOY Company Limited 35 & 42

INSTITUTIONAL	STAND NO.
Autoridad Portuaria de A Coruña	78
IALA-AISM	84
Instituto Hidrográfico de la Marina (IHM) Armada Española	76
MONALISA 2.0	74
Puertos del Estado	77

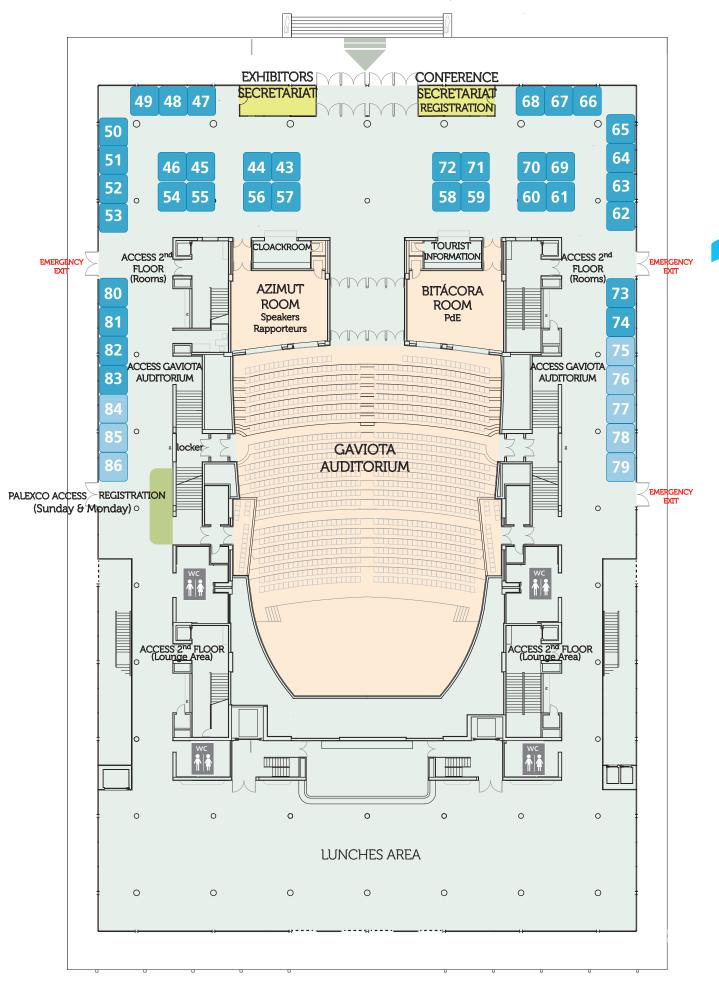
INSTITUTIONAL	STAND NO.
Portos de Galicia	79
Sociedad de Salvamento y Seguridad Marítima (SASEMAR)	75
IALA VTS Symposium 2016 - Malaysia	85
19th IALA Conference 2018 - Republic of Korea	86



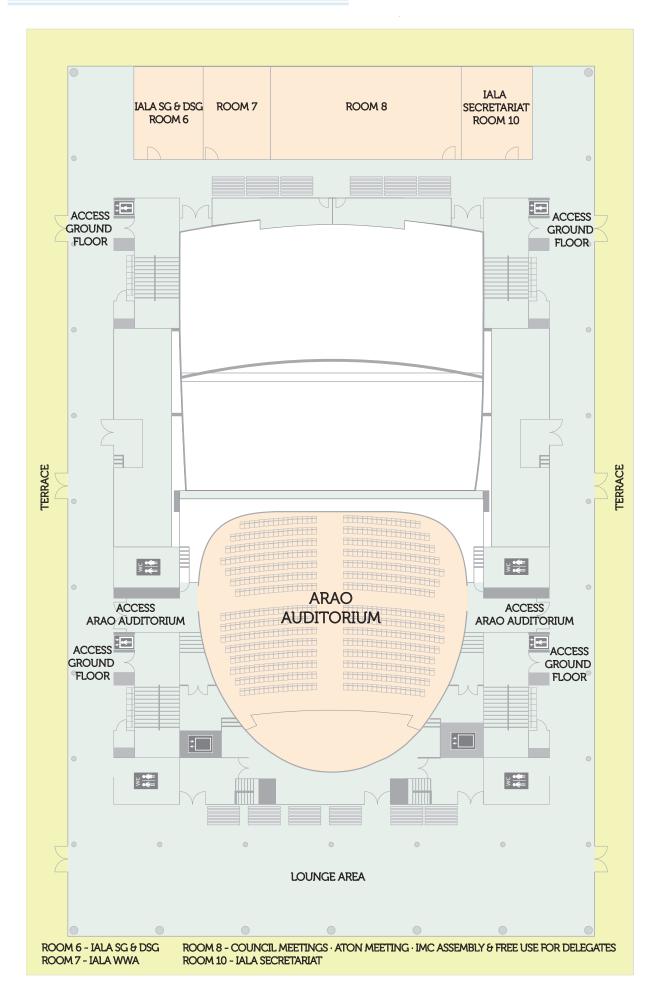
# CONFERENCE FACILITIES

Paperless Conference Simultaneous translation available English, French, Spanish

# GROUND FLOOR PLAN



# SECOND FLOOR PLAN





**B P C** 

# යු **උ** 7 <u>City tour of A Coruña</u>

Departure at 09.30 from the hotels and return at 17:00 h. approximately

A Coruña is a city surrounded by the sea which almost gives the impression that it will break away from its isthmus to return to the island it once was thousands of years ago. Since Roman times it has made its living from maritime trade. Its large harbours – commercial, fishing and sporting – denote its maritime vocation.

Panoramic city tour: Av. de la Marina, with its famous glass-covered balconies; the seafront promenade; San Antón Castle, which houses a 16th century fortress which, in turn, houses the Museum of Archaeology and History showcasing the city's history from the Middle Ages; and the Tower of Hercules, the oldest working lighthouse in the world, with a history dating back over 900 years.

A walking tour of the Old Quarter takes us along its narrow streets and little paved squares so reminiscent of medieval times; past Baroque mansion houses such as the Cornide Palace and the house of Doña Emilia Pardo Bazán; to military installations such as the Captaincy General; to little taverns and tiny boutiques; to the remains of the old city wall with its three "Gateways of the Sea" where you can still see the medieval remains of the Convent of Santa Bárbara; to a wealth of religious architecture: pointed cross-vault arches in the church of Santiago, the oldest in the city; Romanesque in Santa María del Campo; Baroque in Santo Domingo and the church of the Third Venerable Order; and other delightful spots such as the Gardens of San Carlos.

Visit the Museum of Man. The building was designed by the Japanese architect Arata Isozaki and has over 200 interactive modules to learn and reflect on the characteristics of the human species.

Lunch in a city restaurant and return to the hotel.

# Excursion to Santiago de Compositela Departure at 09.00 from the hotels and return at 17:00 h. approximately

All roads might lead to Rome, but a great many of them also lead to Compostela. Humanity has spent centuries discovering routes for the pilgrims who sought to cleanse their souls in Santiago: the Northern routes via the villages of Acebo, Fonsagrada and Ribadeo; the so-called French Way; the "Silver Way"; the entrance via Tui from Portugal; the "sea routes" from A Coruña or Arousa... pilgrims' ways imbued with faith and mystery which have made Santiago de Compostela three things: a European point of reference, one of the major religious capitals of the world, and a city that seems to have dedicated itself to raising buildings towards heaven.

We start with a panoramic tour of the city followed by a visit to the Cathedral, a Romanesque masterpiece, which was completed in 1211 by Master Mateo and his workshop, featuring the stunning Portico of Gloria, the cloister and the crypt housing the remains of St. James the Apostle. Walking around the outside of the Cathedral you can admire the Platerías and Azabachería façades, the Berenguela and Clock Towers and the Holy Door.

Lunch in a traditional city restaurant and return to A Coruña.



Nobility and refinement combined with the simplicity of the rural world; this describes life in the pazos, the country manor houses of the Galician gentry which were mainly built between the 17th and 19th centuries. These elegant buildings have a story to tell, and many of them also have magnificent gardens which are well worth visiting.

The pazos of Galicia, patrician labyrinths of stonework and foliage which display their history in all its glory.

We start with a brief tour of the rías of As Mariñas, leaving A Coruña alongside the beaches of Santa Cristina, Bastiagueiro and beautiful spots such as Santa Cruz with its little port from which you can see the castle standing on a tiny islet; we then pass by the Pazo de Meirás before reaching the village of Betanzos, whose main attraction is the village itself, which was declared a Historic and Artistic Asset in 1970 for its monuments, walls, houses and old quarter. Betanzos was once one of the seven capitals of Galicia and, as such, is home to some important historic and artistic buildings.

We'll visit the Pazo de Mariñán, next to the mouth of the Betanzos ría on the left-hand side of the River Mandeo, very close to historic towns such as Betanzos and Puentedeume.

The main body of the pazo has Baroque architectural features and the gardens are in the French style of the period.

Return to A Coruña after lunch.



Departure from A Coruña by motorway to Cambados, declared a Historic and Artistic Asset, where the noble district of Fefiñanes exists in perfect harmony alongside the maritime flavour of the neighbourhood of San Tomé.

We start with a stroll to the Plaza of Fefiñanes with its pazo of the same name and slab-paved streets. We then embark on a catamaran for a sail along the Ría de Arousa and a close-up look at the bateas, floating structures used to grow mussels, oysters and scallops.

As Cambados is known as the capital of Albariño wine, we'll stop at one of its wineries, to discover for ourselves why this wine is known as the "prince of white wines".

Lunch at the winery.

Finally, we visit the charming seaside village of Combarro, famous for its collection of hórreos (raised granaries) and cruceiros (stone crosses), two of the most characteristic features of Galician architecture.





# Welcome reception | Sunday 25th May

It will be held the 25th May at PALEXCO, the Conference venue, from 18:30 h. to 20:30 h. \**Dress code: Casual* 

# Conference Dinner | Monday 26th May

20.30 - Pazo de Santa Cruz de Mondoi 60, Oza dos Rios - 15319 A Coruña

Departure at 20.00 from the official Conference hotels (Hesperia Finisterre, NH Atlántico, Meliá María Pita, Hesperia Coruña, Hotel Riazor and Tryp Coruña).

The dinner starts at 20.30 in the Pazo de Santa Cruz de Mondoi, an exclusive 16th century estate lying 20 km from A Coruña. This unique and charming location features traditional architecture, beautiful formal gardens and an incomparable setting. Return to the official Conference hotels after dinner. *\*Dress code: Business attire* 

# IMC Evening | Wednesday 28th May

20.30 - Marina Coruña, Alcalde Francisco Vázquez Seafront Promenade - A Coruña

Departure at 20.00 from the official Conference hotels (Hesperia Finisterre, NH Atlántico, Meliá María Pita, Hesperia Coruña, Hotel Riazor and Tryp Coruña).

In accordance with tradition, this evening is organized by the IMC. On this occasion we have prepared an entertainment Spanish fiesta featuring the best of Spain's different regions.

The dinner starts at 20.30 and will take place at Marina Coruña, located in a special part of the city at the entrance to the bay of A Coruña.

Return to the official Conference hotels after dinner. \*Dress code: Casual

# Gala Dinner | Saturday 31st May

20.30 - Hesperia Finisterre Hotel, Paseo del Parrote 2-4 - A Coruña

Departure at 20.00 from the official Conference hotels (NH Atlántico, Meliá María Pita, Hesperia Coruña, Hotel Riazor and Tryp Coruña).

The Gala Dinner commemorates the 500th anniversary of the Trinity House. The dinner starts at 20.30 in the Hesperia Finisterre Hotel, located at the centre of A Coruña just a few metres from PALEXCO and next to the Marina.

Return to the official Conference hotels after dinner. \*Dress code: Black tie

\* Dress code: **Casual:** MEN and WOMEN: Smart casual **Business attire:** MEN: Suit · WOMEN: Short dress or suit **Black tie:** MEN: Black tie, dark lounge suit, full dress uniform or traditional dress (National costume) WOMEN: Cocktail dress, long dress, full dress uniform, traditional dress



# From 27 May to 30 August

EXHIBITION Lighthouses: The light should never switch off

# 30 MAY FRIDAY

Attendance by H.R.H. The Princess Royal, Princess Anne, Master, The Corporation of Trinity House The 500th Anniversary of The Corporation of Trinity House

MULINE



In May 2014, the English institution Trinity House marks the 500th anniversary of its foundation. It was created as a charitable organization for seafarers and over the years has become a world reference in the field of the marine aids to navigation, as the body responsible for the service in England, Wales and the Channel Islands.

The organizers of the IALA-2014 Conference are dedicating the Gala Dinner to the commemoration of this anniversary.

The most relevant highlight in the attendance by H.R.H. The Princess Royal, Princess Anne, Master, The Corporation of Trinity House, to the Conference, where a special session will be devoted to the institution on the morning of Friday 30 May.



Puertos del Estado is inaugurating an exhibition on the history of maritime signalling in Spain entitled "Lighthouses: the light should never switch off", which forms a link with the subtitle of the IALA Conference: From the Tower of Hercules to e-Navigation and beyond.

The exhibition will be open from the week of the Conference through to 30 August 2014 at the headquarters of the NovaCaixagalicia Foundation (Cantón Grande, 21-23. A Coruña), very close to where the IALA Conference is taking place and will feature historic material on the lighthouses belonging to Puertos del Estado as well as other exhibits on loan from other organizations.

Entrance is free of charge.



TU

BUUU

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# Vessels operated by the Hydrographic Institute, Spanish Navy and the Spanish Maritime Safety Agency, SASEMAR

# VISIT

Ship visiting will be available from Wednesday 28th to Thursday 30th May.

They will be berthed at Trasatlántico pier with access from the East side, between PALEXCO and the marina.

# Opening hours:

#### "TOFIÑO"

From 11:00 to 13:00 and from 17:00 to 19:00 In groups of 10 to 15 people

#### "DON INDA"

From 11:00 to 13:00 and from 16:00 to 19:00 In groups of 8 people

The visitors will be attended by the ship's officers in a guided tour of the ship, which will last 20 to 30 minutes.

# HYDROGRAPHIC VESSEL "TOFIÑO" (A-32):

HYDROGRAPHIC INSTITUTE, SPANISH NAVY



#### Main characteristics:

- Length o.a.: 57,6 m
- Beam: 11,7 m
- Draft: 5,2 m
- Speed: 15 knots
- Displacement: 1.150 Tons
- Endurance: 4000 miles
- Accommodation: 69 crew

"DON INDA": Multipurpose, Towing, Salvage, Diving & Oil Recovery Pollution Control Vessel SPANISH MARITIME SAFETY AGENCY, SASEMAR

PALEXCO

HOPPING MALL



#### Main characteristics:

- Length o.a.: 80,00 m
- Beam: 18,00 m
- Depth to main deck: 8,25 m
- Draft: 6,00 m
- Speed: 17,5 knots
- Displacement: 228 Tons
- Endurance: 9000 miles
- Accommodation: 18 crew + 6



# Venue

The Conference will be held at PALEXCO, the Conference and Trade Fair Centre in A Coruña:

PALEXCO Muelle de Trasatlánticos s/n - 15004 A Coruña, Spain Tel: +34 981 22 88 88 Website: www.palexco.com

All the Conference sessions will be held in the rooms located within the ground floor and second floor in Palexco.

### Exhibition

The Industrial Members Committee is proud to host an international exhibition featuring 86 exhibitor booths, covering some 774 square meters of exhibit space. The Exhibition is located in the main hall of PALEXCO. Please see the information on the Exhibition section for more information.

# Official Exhibition Opening

Monday 26th May	from 16:30 to 17:30
Tuesday 27th May	from 08:30 to 18:00
Wednesday 28th May	from 08:30 to 18:00
Thursday 29th May	from 08:30 to 18:00
Friday 30th May	from 08:30 to 16:00

### **Registration hours**

Registration will take place in the ground floor of PALEXCO from Sunday 25th May to Saturday 31st May 2014. The registration desk will operate during the following times:

Sunday 25th May	from 11:00	to 18:00
Monday 26th May	from 09:00	to 17:00
Tuesday 27th May	from 08:30	to 18:00
Wednesday 28th May	from 08:30	to 17:30
Thursday 29th May	from 08:30	to 17:30
Friday 30th May	from 08:30	to 16:00
Saturday 31st May	from 08:30	to 10:00

The registration will be located in the ground floor in Palexco

# Identification

IALA participants are requested to wear their Conference badge and lanyard at all times. This badge allows access to the sessions, exhibition and lunch areas.

The identification tags will be given together with the documentation. Invitations for social events will be included within the identification tags.

# Wifi venue

Wifi network: IALA2014 Password: iala2014

# Delegate bag

The IALA-2014 delegate bag has everything you require for a successful Conference

#### Speakers/Rapporteurs room

The Speakers/Rapporteurs room is located on the ground floor in Azimut room and will be open during the following times:

Monday 26th May	from 08:30	to 17:00
Tuesday 27th May	from 08:30	to 18:00
Wednesday 28th May	from 08:30	to 17:30
Thursday 29th May	from 08:30	to 17:30
Friday 30th May	from 08:30	to 17:30
Saturday 31st May	from 08:30	to 12:00

All speakers must report to the speakers room according to IALA standards distributed for this Conference and which can be requested from the IALA Secretariat. The organisers will not accept any responsibility for the speakers who do not report to the technicians and crew.

Please ensure that you are in the presentation room at least 10 minutes before the start of your session. Please inform of your presence to the chair of the session.

### Coffees and lunches

Coffee break will be served from stations in the Exhibition areas as scheduled in the programme. There may be schedule changes some days.

Working buffet lunches will be served in the *Popa Area* of the ground floor of Palexco between 12:30 and 14:00. Identification tag for lunches is essencial to ensure access to the restaurant.

### Cloakroom service

A cloakroom service located on ground floor is available within the Conference schedule.

# Punctuality

In order to facilitate the organisation and smooth progress of the sessions, punctuality is required.

### Conference and Gala Dinners (26th and 31st May)

Invitation dinner for access is required.

# Hotels (contact details)

The bus services for the Conference, when necessary, only operate from the official hotels.

#### Official hotels

Official floteio			
Hotel	Address	Telephone number	Walking distance to PALEXCO
Hesperia Finisterre	Paseo del Parrote, 2-4	+34 981205400	5 minutes
NH Atlántico	Jardines Mendez Nunez, s/n	+34 981226500	1 minute
Meliá María Pita	Avda. Pedro Barrie de la Maza, 1	+34 981205000	15 minutes
Hesperia Coruña	Juan Florez, 16	+34 981010300	10 minutes
Tryp Coruña	Avda. Ramón y Cajal, 53	+34 981242711	15 minutes
Riazor	Avda. Ramón y Cajal, 53	+34 981253400	10 minutes
Unofficial Hotels			
Hotel	Address	Telephone number	Walking distance to PALEXCO
Sercotel Blue Coruña	Juana de Vega, 7	+34 881888555	10 minutes
Attica21 Coruña	Enrique Mariñas, 34	+34 981179299	more than 30 minutes walking (public transport)
AC A Coruña	Enrique Mariñas, 34	+34 981175490	more than 30 minutes walking (public transport)
Eurostars Ciudad de la Coruña	Juan Sebastián Elcano 13	+34 981211100	more than 30 minutes walking (public transport)
Zenit Coruña	Comandante Fontanes, 19	+34 981218484	10 minutes walking
Carrís Marineda	Crtra Baños de Arteixo, 43 Marineda City Mall	+34 981632436	more than 30 minutes walking (public transport)

#### Time zone

Spain time Central European Standard Time is 2 hours ahead of Greenwich Mean Time (GMT+2) in summer time.

### Climate

This area is frequently known as green Spain as a result of its temperate climate and elevated rain fall. The north of Spain has an average rain fall comparable with that found in the United Kingdom and France and four distinct seasons, although you must always carry an umbrella with you. The reason of this temperate climate is the hundreds of kilometers of coastline.

### Currency

Euro. Foreign banknotes and traveler's check can be exchanged at foreign exchange banks and other authorized moneychangers.

Credit cards: Visa, Visa Electron, American Express and Master Card are widely accepted at major services in the larger cities. The best option is to choose a credit card provider who does not charge commission on overseas transactions and uses the current bank rate.

# **Business hours**

At the shopping centers or shopping areas, the main stores don't close at lunch time, just the small traders.

Opening hours at the city center: Monday- Saturday: 10.00 - 20.00 Sunday: Closed

### Emergencies and information

112 is the common emergency telephone number that can be dialed free of charge from any telephone or any mobile phone.

For any information about the city, you can call 010 for free.

# PHONES OF GENERAL INTEREST

A CONTRACTION

# **TELEPHONES OF INTEREST**

#### **EMERGENCY NUMBERS**

AMBULANCE: 061

FIRE BRIGADE: 080 / +34 981 184 343

RED CROSS +34 981 221 000 / +34 981 222 222

COAST GUARD: +34 981 209 541

TRAFFIC POLICE: 062 / +34 981 637 455

LOCAL POLICE: 092 / +34 981 241 100

NATIONAL POLICE: 091 / +34 981 166 300

CIVIL DEFENSE: +34 981 220 102

S.O.S GALICIA: 112 / 900 444 222

#### USEFUL TELEPHONE NUMBERS

CITIZENS ADVICE: 010 / +34 981 184 278

#### HOSPITALS

COMPLEJO HOSPITALARIO UNIV. A CORUÑA (CHUAC): +34 981 178 000 HOSPITAL ABENTE Y LAGO: +34 981 178 000

HOSPITAL DE OZA: +34 981 178 000

#### PRIVATE HOSPITALS

HOSPITAL USP SANTA TERESA: +34 981 219 800

INSTITUTO MÉDICO QUIRÚRGICO SAN RAFAEL: +34 981 179 000

GRUPO HOSPITALARIO MODELO: +34 981 147 300

#### MUSEUMS

TORRE DE HÉRCULES Telephone: +34 981 223 730 http://www.torredeherculesacoruna.com Opening times: From 10.00 a.m. to 6.00 p.m. (doors close at 5.30 p.m.)

#### Science Museums

AQUARIUM FINISTERRAE: +34 981 189 842 Ext.: 21005 http://www.casaciencias.org/aquarium/

DOMUS: +34 981 189 840 Ext.: 20006 http://www.casaciencias.org/domus/

CASA DAS CIENCIAS: +34 981 189 844 Ext: 19100 http://www.casaciencias.org

MUNCYT: +34 900 100 134 http://www.muncyt.es

Other museums

ARCHAEOLOGICAL MUSEUM, SACRED ART MUSEUM, FINE ARTS MUSEUM, MILITARY MUSEUM, CLOCK MUSEUM, CONTEMPORARY ART and more

#### TOURIST INFORMATION OFFICES

TOURIST INFORMATION OFFICE - Plaza de Mª Pita Address: Plaza de María Pita, 6. 15001 A Coruña Phone: + 34 981 923 093 Web Page: www.turismocoruna.com Opening Times: Monday to Friday: 9 a.m to 8:30 p.m. Saturdays: 10 a.m to 2 p.m and 4 p.m to 8 p.m.

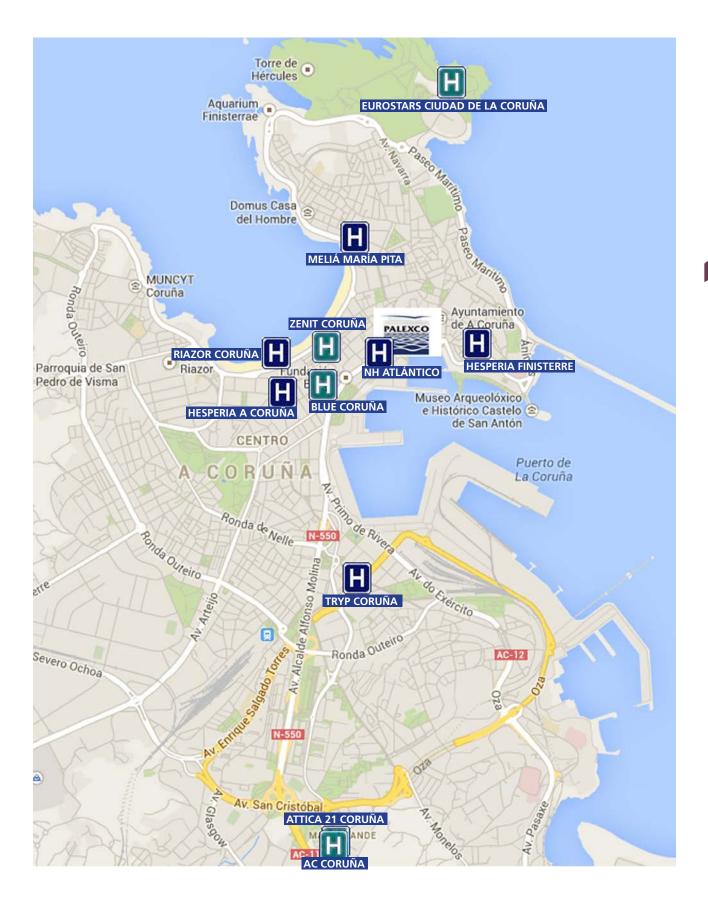
TOURIST INFORMATION OFFICE - Torre de Hercules Address: Avda. de Navarra, s/n. 15002 A Coruña Phone: +34 981 18 42 00 Ext. 26900

#### **CONSULATES**

BÉLGIUM: +34 981 294 600 BRASIL: +34 981 293 487 DENMARK: +34 981 120 628 FRANCE: +34 981 120 142 GREECE : +34 981 134 970 ITALY: +34 981 278 976 MÉXICO: +34 981 639 107 // +34 609 258 004 NORWAY: +34 981 120 628 PANAMA: +34 981 274 044 SWEDEN: +34 981 120 628 U.S.A.: +34 981 213 233









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#### Organizers



#### Supporting institutions



Technical secretariat

