17th Baška GNSS Conference

Global Navigation Satellite Systems
and
Green Navigation and Smart Systems

11 – 15 May 2025
Baška, the Island of Krk, Croatia

CONFERENCE PROGRAMME

11 May 2025 (Sunday)

19:00 - 22:00	Conference welcome gathering / Ice-breaking dinner *(Conference package)*	Restaurant Corinthia Hotel

12 May 2025 (Monday)

08:30 - 09:00	**Registration**	Conference Hall Corinthia Hotel
09:00 - 10:00	***Welcome speeches*** Ms. Ivana Topić, mag. oec. Director, Tourist Board of the Baška Municipality, Krk Island, Croatia Mr. Toni Juranić Mayor, Baška, Krk Island, Croatia Mr. Nenad Sikirica Dean, University of Applied Sciences Hrvatsko Zagorje, Krapina, Croatia Prof. Ana Perić Hadžić, PhD Dean, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia Prof. Lado Kranjčević, PhD Dean, University of Rijeka, Faculty of Engineering, Rijeka, Croatia Prof. Marko Šoštarić, PhD Dean, University of Zagreb, Faculty of Transport and Traffic Sciences, Zagreb, Croatia ***Opening*** Mr. John R. Pottle, BSc, MBA, FRIN Director, The Royal Institute of Navigation, London, UK	Conference Hall Corinthia Hotel

10:00 - 10:30	Coffee break	Conference Hall Corinthia Hotel

<table>
<tr><td colspan="3" align="center">Plenary session I

Serdjo Kos
University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia
Hrvoje Gold
University of Zagreb, Faculty of Transportation and Traffic Sciences, Zagreb, Croatia</td></tr>
<tr>
<td align="center">10:30
-
11:05</td>
<td align="center">John R. Pottle
Past Director, The Royal Institute of Navigation, London, UK

<i>Keynote lecture</i>

Latest "best practices" approaches for achieving
PNT resilience and preparedness</td>
<td align="center">Conference Hall
Corinthia Hotel</td>
</tr>
<tr>
<td align="center">11:10
-
11:45</td>
<td align="center">David Brčić
University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia

<i>Keynote lecture</i>

Young GNSS Education and Training (yGET): An Overview</td>
<td align="center">Conference Hall
Corinthia Hotel</td>
</tr>
<tr>
<td align="center">11:50
-
12:25</td>
<td align="center">Thomas Southall
International Association of Marine Aids to Navigation and Lighthouse Authorities

<i>Keynote lecture</i>

Building on the Singapore Declaration</td>
<td align="center">Conference Hall
Corinthia Hotel</td>
</tr>
</table>

12:30 - 14:00	Lunch <i>(Conference package)</i>	Restaurant Corinthia Hotel

<table>
<tr><td colspan="3" align="center">Conference session I
Chairs:

Tomislav Kos
University of Zagreb, Faculty of Electrical Engineering and Computing, Zagreb, Croatia
Franc Dimc
University of Ljubljana, Faculty of Maritime Studies and Transport, Portorož, Slovenia</td></tr>
<tr>
<td align="center">14:00
-
14:20</td>
<td align="center">Antonio Tupek[1*], Mladen Zrinjski[1], Krunoslav Špoljar[1], Karlo Stipetić[1]
[1]University of Zagreb, Faculty of Geodesy, Zagreb, Croatia
GNSS Receiver Antenna Calibration and Application</td>
<td align="center">Conference Hall
Corinthia Hotel</td>
</tr>
<tr>
<td align="center">14:20
-
14:40</td>
<td align="center">Staš Dolinšek[1*], Polona Pavlovič Prešeren[2], Aljaž Blatnik[1],
Boštjan Batagelj[1]
[1]Faculty of Electrical Engineering, University of Ljubljana, Slovenia; [2]Faculty of Civil and Geodetic Engineering, University of Ljubljana, Slovenia
Automated Characterization of Jamming Effects on Low-Cost GNSS Receiver Performance</td>
<td align="center">Conference Hall
Corinthia Hotel</td>
</tr>
</table>

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* Presenting author (the same applies throughout the document)

Time		Location
14:40 - 15:00	Matej Bažec[1*], Franc Dimc[1], Gianmarco Baldini[2], Polona Pavlovčič-Prešeren[3] [1]Faculty of Maritime and Transportation Studies, University of Ljubljana, Portorož, Slovenia; [2]Joint Research Center, Ispra, Italy; [3]Faculty of Civil Engineering and Geodesy, University of Ljubljana, Ljubljana, Slovenia GNSS Signal Interference Measurement in the Port of Koper	Conference Hall Corinthia Hotel
15:00 - 15:20	Neil Gogoi[1*], Paolo Dabove[1], Milad Bagheri[1] [1]Politecnico di Torino, Torino, Italy GNSS-aided Tropospheric delay mitigation in ADS-B MLAT	Conference Hall Corinthia Hotel
15:20 - 15:50	Coffee break	Conference Hall Corinthia Hotel
15:50 - 18:20	Darko Glujić, Goran Vukelić Discrete-event simulation with virtual reality: Coupling CFD and VR for advanced firefighting training *Workshop*	Conference Hall Corinthia Hotel
19:30 - 20:00	Cocktail gathering *(Conference package)*	Restaurant / Terrace Hotel Zvonimir
20:00 - 24:00	Gala dinner *(Conference package)*	Restaurant Hotel Zvonimir

13 May 2025 (Tuesday)

Time		Location
09:30 - 10:00	**Registration**	Conference Hall Corinthia Hotel
	Plenary session II Chairs: Jasna Prpić-Oršić University of Rijeka, Faculty of Engineering, Rijeka, Croatia John R. Pottle The Royal Institute of Navigation, London, UK	
10:00 - 10:35	David Goddard The Royal Institute of Navigation, London, UK *Keynote lecture* Are Mariners too dependent on GNSS?	Conference Hall Corinthia Hotel
10:40 - 11:10	Coffee Break	Conference Hall Corinthia Hotel
11:15 -	Marko Valčić University of Zadar, Maritime Department, Zadar, Croatia	Conference Hall Corinthia Hotel

11:50	*Keynote lecture* Leveraging dynamic positioning technologies for future autonomous ships: operational and educational perspectives	
11:55 - 12:30	Bridget Diakun Lloyd's List Intelligence *Keynote lecture* Unintended consequences of GNSS interference in the maritime domain	Conference Hall Corinthia Hotel
12:30 - 14:00	Lunch *(Conference package)*	Restaurant Corinthia Hotel

Conference Session II Chairs: Mario Muštra University of Zagreb, Faculty of Transport and Traffic Sciences, Zagreb, Croatia Danijel Šugar University of Zagreb, Faculty of Geodesy, Zagreb, Croatia	

14:00 - 14:20	Lahouaria TABTI[*1], Younes Ahmed Betchim[1], Hicham Dekkiche[1] [1]Department of Space Geodesy, Centre of Space Techniques, Algerian Space Agency, Algeria Characteristics and Performance Assessment of Corrections Transmitted by the Algerian SBAS Using Alcomsat-1	Conference Hall Corinthia Hotel
14:20 - 14:40	Dragana Krstic[1*], Suad Suljovic[2], Nenad Petrovic[1] [1]University of Niš, Faculty of Electronic Engineering, Niš, Serbia; [2]The University Metropolitan, Belgrade, Serbia VLM -Aided Experimentation: Case Study of GNSS Signal Transmission under Fading and Interference Conditions	Conference Hall Corinthia Hotel
14:40 - 15:00	Danijel Šugar[1*], Matija Matijević[1], Petar Jelić[1] [1]University of Zagreb, Faculty of Geodesy, Zagreb, Croatia GNSS RTK Measurements under Conditions of Increased Ionospheric Activity	Conference Hall Corinthia Hotel
15:00 - 15:20	Andro Rak[1*], Tomislav Mrakovčić[1], Lado Kranjčević[1,2] [1]Faculty of Engineering, University of Rijeka, Rijeka, Croatia; [2]A Center for Advanced Computing and Modelling, Rijeka, Croatia Investigation of Pipeline Flow Distribution for UV Reactors in Ship Ballast Water Treatment Systems	Conference Hall Corinthia Hotel
15:20 - 15:50	Coffee break	Conference Hall Corinthia Hotel
15:50 - 17:10	David Brčić Selected topics on GNSS Positioning Analysis with Examples in R *Workshop*	Conference Hall Corinthia Hotel
17:15 - 18:00	Meeting of the International Programme and Organising Committee (*closed session*)	Corinthia Hotel

18:30 - 20:00	Regular dinner *(Conference package)*	Restaurant Corinthia Hotel
21:00	*Friends night*	Porto Club Baška

14 May 2025 (Wednesday)

09:30 - 10:00	**Registration**	Conference Hall Corinthia Hotel

Conference Session III

Chairs:

Nikola Lopac
University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia
Nermin Hasanspahić
University of Dubrovnik, Faculty of Maritime Studies, Dubrovnik, Croatia

10:00 - 10:20	Alison Brown[1*], Calvin Reese[1], Dien Nguyen[1], Zach Ruble[1] [1]NAVSYS Corporation, Colorado Springs, Colorado, USA **Position Navigation and Timing as a Service (PNTaaS) deployment for European Operations**	Conference Hall Corinthia Hotel
10:20 - 10:40	Dejan Žagar[1*], Franc Dimc[1] [1]University of Ljubljana, Faculty of Maritime Studies and Transport, Portorož, Slovenia **Evaluation of EDA Sensors Performance in Simulated Port Approach Navigation**	Conference Hall Corinthia Hotel
10:40 - 11:00	Luka Matijašević[1*], Serdjo Kos[2], Mario Musulin[1], David Brčić[2] [1]University of Defence and Security Dr. Franjo Tuđman, Zagreb, Croatia; [2]University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia **Study on Ionospheric and Geomagnetic Dynamic Variations Impact on GPS L1 Positioning: Emergent Structural Specificities**	Conference Hall Corinthia Hotel

11:00 - 11:30	Coffee break	Conference Hall Corinthia Hotel

Conference Session IV

Chairs:

Jasna Prpić Oršić
University of Rijeka, Faculty of Engineering, Rijeka, Croatia
Merica Slišković
University of Split, Faculty of Maritime Studies, Split, Croatia

11:30 - 11:50	Marko Delić[1*], Nina Lenkić[1], Luka Tolić[1], Miro Petković[1] [1]Faculty of Maritime studies, University of Split, Split, Croatia **Enhancing Maritime Security Through Multi-Satellite Ship Detection**	Conference Hall Corinthia Hotel

Time	Presentation	Location
11:50 - 12:10	Ivan Budimir[1*], Domagoj Žarković[1], Bartul Domazet[1], Anita Gudelj[1], Merica Slišković[1] [1]University of Split, Faculty of Maritime Studies, Split, Croatia **Oil Spill Detection using Satellite Radar Image Classification**	Conference Hall Corinthia Hotel
12:10 - 12:30	Nikola Lopac[1,2*], Karlo Severinski[1,2], Tomislav Krljan[1], Jonatan Lerga[2,3] [1]University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia; [2]University of Rijeka, Center for Artificial Intelligence and Cybersecurity, Rijeka, Croatia; [3]University of Rijeka, Faculty of Engineering, Rijeka, Croatia **Computer Vision-Based Real-Time Vessel Detection and Tracking in Marinas**	Conference Hall Corinthia Hotel
12:30 - 12:50	Marijana Marjanović[1*], Jasna Prpić-Oršić[1], Marko Valčić[1,2] [1]University of Rijeka, Faculty of Engineering, Rijeka, Croatia; [2]University of Zadar, Maritime Department, Zadar, Croatia **Decision Support for Ship Routing Considering Weather Forecast Uncertainties**	Conference Hall Corinthia Hotel

| 12:50 - 14:00 | Lunch
(Conference package) | Restaurant Corinthia Hotel |

Conference Session V

Chairs:

Helena Ukić-Boljat
University of Split, Faculty of Maritime Studies, Split, Croatia

Josip Vuković
University of Zagreb, Faculty of Electrical Engineering and Computing, Zagreb, Croatia

Time	Presentation	Location
14:00 - 14:20	Iru Haddad Marrero[1*], Giuseppe Rosa Falcón[1], Zdeslav Jurić[1], Ante Čalić[1] [1]Faculty of Maritime studies, University of Split, Split, Croatia **Estimation of ship's wind added resistance by analysing wind data from Copernicus services**	Conference Hall Corinthia Hotel
14:20 - 14:40	Enrico Del Piero[1], Luca Braidotti[1*], Jasna Prpić-Oršić[2] [1]Department of Engineering and Architecture, University of Trieste, Trieste, Italy; [2]Faculty of Engineering, University of Rijeka, Rijeka, Croatia **Preliminary Insights into Permeability Effect on Progressive Flooding Simulation**	Conference Hall Corinthia Hotel
14:40 - 15:00	Jasna Prpić-Oršić[1*], Ivan Sulovsky[1], Marijana Marjanović[1] [1]Faculty of Engineering, University Rijeka, Rijeka, Croatia **Uncertainty in Estimating Ship Voluntary Speed Reduction**	Conference Hall Corinthia Hotel
15:00 - 15:20	Luka Kramarić[1*], Mario Muštra[1], Tomislav Radišić[1] [1]University of Zagreb, Faculty of Transport and Traffic Sciences, Zagreb, Croatia **Possibilities of GNSS Augmentation using UWB Transceivers**	Conference Hall Corinthia Hotel

| 15:20 - 15:50 | Coffee break | Conference Hall Corinthia Hotel |

Conference Session VI

Chairs:

	Mario Bakota University of Split, Faculty of Maritime Studies, Split, Croatia **Danijel Šugar** University of Zagreb, Faculty of Geodesy, Zagreb, Croatia	
15:50 - 16:10	Karlo Severinski[1*], Nikola Lopac[1,2], Jonatan Lerga[2,3] [1]University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia; [2]University of Rijeka, Center for Artificial Intelligence and Cybersecurity, Rijeka, Croatia; [3]University of Rijeka, Faculty of Engineering, Rijeka, Croatia Integrating Large Language Models into Maritime Operations: Enhancing Automation and Decision-Making	Conference Hall Corinthia Hotel
16:10 - 16:30	Neven Grubisic[1*], David Brčić[1], Sanjin Valcic[1], Tomislav Krljan[1] [1]University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia Developing a Transport Supply Model using AIS Data	Conference Hall Corinthia Hotel
16:30 - 16:50	Maro Car[1*], David Brčić[2], Nermin Hasanspahić[1], Mario Bakota[3] [1]University of Dubrovnik, Faculty of Maritime Studies, Dubrovnik, Croatia; [2]University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia; [3]University of Split, Faculty of Maritime Studies, Split, Croatia Seafarers' Perspectives on ECDIS Usage: Benefits, Challenges, and best Navigational Practices	Conference Hall Corinthia Hotel
16:50 - 17:10	Marko Vukšić[1*], Jasmin Ćelić[1], Ivan Panić[1], Aleksandar Cuculić[1] [1]University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia WI-FI Vulnerabilities in Maritime Operations: Risk Assessment and Detection Strategies	Conference Hall Corinthia Hotel

17:15 - 17:45	Programme chairs and Editors-in-Chief: Assoc. prof. Marko Valčić, PhD Assoc. prof. David Brčić, PhD ***Conference and Workshop Summary*** _____ ***CLOSING CEREMONY*** Chair: Mr. John R. Pottle, BSc MBA, FRIN _____ ***Conference partner journals and Special Issues*** Promet - Traffic & Transportation Pomorstvo - Scientific Journal of Maritime Research Remote Sensing: Remote Sensing in Maritime Navigation and Transportation Remote Sensing: International GNSS Service Validation, Application and Calibration (2nd Edition) Systems: Modelling and Optimization of Transportation and Logistics System	Conference Hall Corinthia Hotel

18:30 -	Gathering in front of the Corinthia hotel	-

18:45		

18:45 - 23:00	Social gathering with prosciutto, domestic products and wine tasting @ Prosciutteria Gospoja	Vrbnik, Krk Island

15 May 2025 (Thursday)		

10:00 - 16:00	**Boat trip with field research** *(lunch included)*	Tourist Boat

17:00	**Departures**	-

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Locations

Corinthia Hotel (Sunny Baška Hotel): https://maps.app.goo.gl/pJFJwwqBXSMbsYn27

Zvonimir Hotel (Sunny Baška Residence): https://maps.app.goo.gl/NpvLuS6hKWeqCisF8

Porto Club Baška: https://maps.app.goo.gl/LkGzVDMcoNNwefK97

Pršutana Gospoja - Prosciutteria Gospoja: https://maps.app.goo.gl/z7FdzcvmTJvGkAp97

Boat trip meeting point: https://maps.app.goo.gl/WDE9zjC9xPBKkkVL9

Info: Lunches and dinners (including gala dinner) as defined in the *Accommodation & Package form* based on your stay are financially covered by the Conference package (Valamar Hotels).

Coffee breaks, Wednesday country dinner with transport, and boat excursion are sponsored by the organisers.
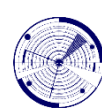
Therefore, once you are here, enjoy!

The 17th Baška Conference

GNSS

Global Navigation Satellite Systems
Green Navigation and Smart Systems

Baška, the Island of Krk, Croatia, 11 – 15 May 2025

ORGANISERS

Royal Institute of Navigation, London, United Kingdom; **University of Rijeka, Faculty of Maritime Studies**, Rijeka, Croatia; **University of Rijeka, Faculty of Engineering**, Rijeka, Croatia; **University of Zadar, Maritime Department**, Zagreb, Croatia; **University of Zagreb, Faculty of Transport and Traffic Sciences**, Zagreb, Croatia

TECHNICAL CO-SPONSORS

University of Applied Sciences Hrvatsko Zagorje, Krapina, Croatia

INTERNATIONAL PROGRAM, SCIENTIFIC AND ORGANISING COMMITTEE

Conference chair: John R Pottle, Director, The Royal Institute of Navigation, London, UK

Conference co-chairs: David Brčić, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Hrvoje Gold**, University of Zagreb, Faculty of Transportation and Traffic Sciences, Zagreb, Croatia, **Serdjo Kos**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Jasna Prpić-Oršić**, University of Rijeka, Faculty of Engineering, Rijeka, Croatia (and Chair of Smart Blue & Green Maritime Technology Workshop), **Marko Valčić**, University of Zadar, Maritime Department, Zadar, Croatia

Programme chairs: Marko Valčić, University of Zadar, Maritime Department, Zadar, Croatia, **David Brčić**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia

International Organising Committee: Clare Stead, Communications & Events Manager, The Royal Institute of Navigation, London, United Kingdom, **Đani Mohović**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Danijel Šugar**, University of Zagreb, Faculty of Geodesy, Zagreb, Croatia, **Franc Dimc**, University of Ljubljana, Faculty of Maritime Studies and Transport, Portorož, Slovenia, **George Shaw**, General Lighthouse Authority, London, United Kingdom, **Gino Dardanelli**, The University of Palermo, Department of engineering, Palermo, Italy, **Helena Ukić Boljat**, University of Split, Faculty of Maritime Studies, Split, Croatia, **Josip Vuković**, University of Zagreb, Faculty of Electrical Engineering and Computing, Zagreb, Croatia, **Luca Braidotti**, University of Trieste, Department of Engineering and Architecture, Trieste, Italy, **Luka Grbić**, University of Zadar, Maritime Department, Zadar, Croatia, **Mario Muštra**, University of Zagreb, Faculty of Transportation and Traffic Sciences, Zagreb, Croatia, **Mariusz Specht**, Gdynia Maritime University, Gdynia, Poland, **Nenad Sikirica**, Krapina University of Applied Sciences, Krapina, Croatia, **Neven Grubišić**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Nikola Lopac**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Ramsey Faragher**, Director, The Royal Institute of Navigation, London, United Kingdom, **Srđan Žuškin**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Tomislav Josip Mlinarić**, University of Zagreb, Faculty of Transport and Traffic Sciences, Zagreb, Croatia, **Tomislav Kos**, University of Zagreb, Faculty of Electrical Engineering and Computing, Zagreb, Croatia, **Dea Aksentijević**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Ivan Sulovsky**, University of Rijeka, Faculty of Engineering, Rijeka, Croatia, **Mirjana Borucinsky**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Mario Bakota**, University of Split, Faculty of Maritime Studies, Split, Croatia, **Jana Kegalj**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Marijana Balas**, University of Rijeka, Faculty of Engineering, Rijeka, Croatia, **Marko Strabić**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Maro Car**, University of Dubrovnik, Faculty of Maritime Studies, Dubrovnik, Croatia, **Tomislav Krljan**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia

Reviewers: Serdjo Kos, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Jasna Prpić-Oršić**, University of Rijeka, Faculty of Engineering, Rijeka, Croatia, **Nermin Hasanspahić**, University of Dubrovnik, Faculty of Maritime Studies, Dubrovnik, Croatia, **Đani Mohović**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Franc Dimc**, University of Ljubljana, Faculty of Maritime Studies and Transport, Portorož, Slovenia, **Gino Dardanelli**, The University of Palermo, Department of engineering, Palermo, Italy, **Josip Vuković**, University of Zagreb, Faculty of Electrical Engineering and Computing, Zagreb, Croatia, **Luca Braidotti**, University of Trieste, Department of Engineering and Architecture, Trieste, Italy, **Mate Barić**, University of Zadar, Maritime Department, Zadar, Croatia, **Mario Muštra**, University of Zagreb, Faculty of Transportation and Traffic Sciences, Zagreb, Croatia, **Neven Grubišić**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Nikola Lopac**, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia, **Beldjiali Bilal**, Agence Spatiale Algerienne, Department of Space Geodesy, Algiers, Algeria

MEDIA COVERAGE

Navigation News (London, UK), **Burza Nautike** (Rijeka, Croatia), **My Coordinates** (Delhi, India)

VENUE HOSTS

Valamar Baška (Poreč, Croatia), **Municipal Tourism Office Baška** (Baška, Croatia)