





Royal Institute of Navigation
Science Technology Practice



3rd GNSS Vulnerabilities and Solutions Conference



**Baška, Krk Island, Croatia,
5 - 8 September 2010**

Technically co-sponsored by	
Faculty of Maritime Studies, University of Rijeka, Croatia	Faculty of Traffic and Transport Engineering, University of Zagreb, Croatia
	

Welcome to 3rd GNSS Vulnerabilities and Solutions Conference!

The Royal Institute of Navigation, London, UK, and the Institute of Engineering Surveying and Space Geodesy, University of Nottingham, UK, have a pleasure in welcoming you to the **3rd GNSS Vulnerabilities and Solutions 2010 Conference** to be held **5 - 8 September 2010 in Baška, Krk Island, Croatia.**

This traditional and unique world-wide event aims to gather GNSS experts and focuses on GNSS problems and vulnerabilities, as well as to developments aiming to improve the accuracy and reliability of GNSS. The unique environment of Baska and its natural resources and rich history, combined with friendly hospitality will again create an inspiring atmosphere for ideas and knowledge exchange, well known to those who attended the last year's conference.

Conference activities will be organised in the following sections:

- Core satellite navigation systems (plenary),
- Space Weather and Ionospheric Effects on GNSS,
- Safety- and Mission-Critical Applications,
- Location-Based Services (LBS), and
- Intelligent Transport Systems (ITS)

The latest developments can be followed on the special Twitter channel at: <http://twitter.com/satnavigator>. At the same time, the important information can be found at the RIN conference web-site at: <http://bit.ly/9tuseX>.

Participation to the 3rd GNSS Vulnerabilities and Solutions Conference is subject to a registration with the Royal Institute of Navigation. Conference participants are kindly requested to fill in the registration form available in this document and send it with participation fee payment details to RIN London office, as explained in the form provided in this programme. The special all-inclusive accommodation package is available for conference participants, who are kindly asked to book the accommodation with Hoteli Baška at their earliest convenience and no later than 18 August 2010. Details are presented in a dedicated section of this programme. Alternatively, the participants may choose other accommodation arrangements.

The conference venue is well connected with several airports in Central Europe via Rijeka/Krk Airport (<http://www.rijeka-airport.hr/schedule.asp>). Visitors from nearby countries will find travel to Baška by car very convenient.

You are kindly invited to join the leading GNSS experts and discuss the most important issues related to further exploitations of satellite navigation systems in the wonderful Mediterranean environment of Northern Adriatic. In addition, the organising committee kindly appreciate your efforts in informing your colleagues about the event.

Finally, you are invited to contact Dr Renato Filjar, FRIN (e-mail: renato.filjar@yahoo.co.uk) for any further information or assistance you may need in regard to your participation to the 3rd GNSS Vulnerabilities and Solutions Conference in Baška.

We are looking forward for a privilege to welcome you to Baška.

Conference organising committee

International Programme Committee

Terry Moore, FRIN, University of Nottingham, UK, Chair
David Barnes, OBE FRIN, The Royal Institute of Navigation, London, UK, Co-chair
David Broughton, MBE FRIN, The Royal Institute of Navigation, London, UK
Ljiljana R Cander, Rutherford Appleton Laboratory, Chilton, UK
Jordi Corbera, The Spanish Institute of Navigation, Barcelona, Spain
Sharafat Gadimova, UN Office of Outer Space Affairs, Vienna, Austria
Hrvoje Gold, University of Zagreb, Croatia
Miro Govedarica, University of Novi Sad, Serbia
Norman Hughes, FRIN, The Royal Institute of Navigation, London, UK
Darko Huljenić, Ericsson Nikola Tesla, Zagreb, Croatia
Gordan Ježić, University of Zagreb, Croatia
Serdjo Kos, FRIN, University of Rijeka, Croatia
David Last, FRIN, Consultant Engineer and Expert Witness, Conwy, UK
Washington Ochieng, FRIN, Imperial College London, UK
Hank Skalsky, Dept for Transportation, Peterson AFB, USA
Grigory Stupak, Russian Institute for Space Device Engineering, Moscow, Russia
Nigel Wall, FRIN, Location & Timing Knowledge Transfer Network, Teddington, UK
Adam Weintrit, FRIN, Gdynia Maritime University, Poland
Bruno Zolesi, Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy

Organising committee

Peter Chapman-Andrews, LVO MBE RN FRIN, The Royal Institute of Navigation, London, UK, Chairman
Djurdja Daljevac, Hoteli Baška, Croatia
Renato Filjar, FRIN, The Royal Institute of Navigation Croatian Branch, Croatia
Victoria Jeffers, The Royal Institute of Navigation, London, UK
Majda Šale, Baška Tourist Office, Croatia
Marko Ševrović, MRIN, Institute of Transport and Communications, Zagreb, Croatia
Valentina Topić, Hoteli Baška, Croatia
Krešimir Vidović, MRIN, Institute of Transport and Communications, Zagreb, Croatia
Dino Županović, University of Zagreb, Croatia

5 September 2010	
20.00	<p><i>Opening ceremony</i></p> <p>Toni Juranić, Major, City of Baška, Croatia Capt Mario Babić, Ministry of Sea, Transport and Infrastructure, Republic of Croatia Peter Chapman-Andrews, FRIN, Director, The Royal Institute of Navigation, London, UK Prof Terry Moore, FRIN, The Institute of Engineering Surveying and and Space Geodesy, University of Nottingham, UK Dr Ljiljana R Cander, Rutherford Appleton Laboratory, Chilton, UK Prof Serdjo Kos, FRIN, Dean, Faculty of Maritime Studies, University of Rijeka, Croatia Majda Šale, Tourist Office, Baška, Croatia Djurdja Daljevac, Hoteli Baška, Croatia</p> <p><i>Welcome cocktail - Atrium Residence Baška Hotel</i></p>
6 September 2010	
8.30	<p>Registration</p> <p><i>Plenary session</i> Chairman: Prof Terry Moore, FRIN, UK</p>
9.00	<p>Hank Skalski Dept of Transportation, Peterson AFB, USA <i>GPS, GPS Modernisation, GPS Augmentation and US Policy</i></p>
9.20	<p>Prof Grigory Stupak, Dr Mark Shmulevich Russian Institute of Space Device Engineering, Moscow, Russia <i>GLONASS system status and future prospects</i></p>
9.40	<p>Sharafat Gadimova International Committee on GNSS, UNOffice of Outer Space Affairs, Vienna, Austria <i>International Committee on Global Navigation Satellite Systems (ICG): United Nations International Space Weather Initiative (UNISWI)</i></p>
10.00	<p>Nazli Can Istanbul, Turkey <i>Legal aspects of GNSS</i></p>
10.20	<p>Dr Ljiljana Cander STFC, Rutherford Appleton Laboratory, Chilton, UK <i>The ionosphere space weather in action: storms, waves, irregularities</i></p>
10.40	<p>Coffee break</p> <p><i>Session: Location-based services</i> Chairman: Prof Tomislav Kos, FRIN, Croatia</p>
11.00	<p>F Ortag Austria <i>SemWay - Semantic Ways, Findings about Landmarks</i></p>
11.20	<p>D Vrhovski Croatia <i>GPS Vulnerability in Road Infrastructure Surveying for Map Making</i></p>

11.40	K Vidović Croatia <i>SRTM data utilisation in GPS campaign planning</i>
12.00	K Vidović Croatia TBD
12.30	Lunch
	<i>Session: Safety- and mission-critical applications I</i> <i>Chairman: Prof Serdjo Kos, FRIN, Croatia</i>
15.00	U Kroener Italy <i>Hardening of civilian GNSS based trackers</i>
15.20	R Hamilton USA <i>Department of Homeland Security Interference Detection and Mitigation Progress</i>
15.40	J Svetak Slovenia <i>Graphic of the Accuracy of the Observation - Important Factor of the Subsequent Monitoring of the Execution Plan</i>
16.00	H Gold Croatia <i>Mitigation of local sources of GNSS vulnerabilities</i>
16.20	Coffee break
	<i>Session: Space weather effects on GNSS I</i> <i>Chairman: Dr Ljiljana R Cander, UK</i>
16.40	D Buresova Czech Republic <i>Magnetic storm effects on ionospheric F2 layer</i>
17.00	M Aquino / T Moore UK <i>The implementation of the Cornell Ionospheric Scintillation Model for testing GPS receiver phase tracking loops into the Spirent GNSS Simulator, and model performance analysis</i>
17.20	M Sevrovic Croatia <i>A non-Klobuchar ionospheric correction model for the Adriatic Sea area</i>
20.30	Conference dinner
7 September 2010	
	<i>Session: Safety- and mission-critical applications II</i> <i>Chairman: Peter Chapman-Andrews, FRIN</i>
9.00	T Kos Croatia <i>GPS positioning performance in urban environment</i>
9.20	D Last UK <i>Demonstrating the effects of GPS jamming on marine navigation</i>
9.40	T Bull

	<p style="text-align: center;">UK</p> <p style="text-align: center;"><i>A new high performance way of detecting and mitigating the jamming and meaconing of commercial GNSS signals</i></p>
10.00	<p style="text-align: center;">R Jaeger Germany <i>Geodetic infrastructure for GNSS positioning service (GIPS)</i></p>
10.20	<p style="text-align: center;">Coffee break</p>
	<p style="text-align: center;"><i>Session: Space weather effects on GNSS performance II</i> <i>Chairman: Prof Hrvoje Gold, Croatia</i></p>
10.40	<p style="text-align: center;">J Boska Czech Republic <i>Project SX5 - Scientific Service Support Based on Galileo E5 Receivers</i></p>
11.00	<p style="text-align: center;">D Brcic Croatia <i>Combining SID and GPS receivers</i></p>
11.20	<p style="text-align: center;">R Filjar Croatia <i>GNSS receiver as a space weather sensing device</i></p>
12.00	<p style="text-align: center;">Lunch</p>
	<p style="text-align: center;"><i>Session: Intelligent Transport Systems</i> <i>Chairman: Dr Dražen Vrhovski, FRIN, Croatia</i></p>
16.00	<p style="text-align: center;">A Weintrit Poland <i>e-Navigation Architecture: The present status and work ahead</i></p>
16.20	<p style="text-align: center;">G Nowacki Poland <i>Implementation problems of automatic emergency information system - eCall</i></p>
16.40	<p style="text-align: center;">D Šarić Croatia <i>Mitigation of GNSS vulnerabilities effects on eCall operation</i></p>
17.00	<p style="text-align: center;">Session summaries</p>
17.30	<p style="text-align: center;">Closing the conference</p>
21.00	<p style="text-align: center;">Social event - exclusively for conference participants</p>

Accommodation

Conference participants are solely responsible for arranging the accommodation. Baška offers a wide variety of accommodation models starting from excellent 5-, 4- and 3-star hotels, through B&Bs in private accommodation (2- to 5-star) and ending with camps.

Hoteli Baška offer a discounted scheme for guaranteed accommodation arrangements for the 3rd GNSS Vulnerabilities and Solutions Conference participants, as follows:

Accommodation in Hotel Zvonimir *** Price in EUR per person and day**

- Luxury Single Room (B&B) 74,00 EUR
- Every additional day (half-board) 74,00 EUR
- Double Room (per person and day, breakfast included)
66,00 EUR
- Residence Tax 4,65 EUR

Accommodation in Hotel Corinthia-Baška ***

- Luxury Single Room / B&B 65,00 EUR
- Every additional day (half-board) 65,00 EUR
- Double Room (per person and day, breakfast included)
59,00 EUR
- Residence Tax 4,65 EUR

Discounts are valid for duration of the conference, as well as for extended stay before or after the conference. Since the early September is still considered a high season on the Northern Adriatic with extremely high demand for accommodation in Baška, conference participants are strongly advised to book the accommodation at Hoteli Baška booking site: <http://www.hotelibaska.hr/default.aspx>, by clicking the option *Online Booking & Special Offers*, and entering your details with referring the access code **GNSS (this assures the discounted prices for conference participants exclusively)**. **Offer is valid until 18 August 2010.**

For further information and assistance in regard to a conference accommodation, the participants are kindly advised to contact Ms Valentina Topic, Hoteli Baška (telephone: +385 51 656 132, e-mail: topic@hotelibaska.hr).



GNSS Vulnerabilities and Solutions, Baska, 5-8 September 2010

PLEASE COMPLETE IN BLOCK CAPITALS

* Denotes a required field

MEMBERSHIP No (if applicable)		TITLE (MR/MRS etc)	
FIRST NAME:*			
SURNAME: *			
JOB TITLE: *			
COMPANY /ORGANISATION* (to appear on the badge):			
ADDRESS:			
POSTCODE:		COUNTRY:*	
PHONE NUMBER		EMAIL*	
Please tick the box to exclude your details from the published delegate list should there be one			

Additional details (e.g. dietary requirements)¹

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REGISTRATION RATES

The registration fees include:

Access to Conference sessions and conference materials

Sunday – welcome cocktail and dinner

Monday – lunch, 2 coffee breaks, cocktail and conference dinner with live music

Tuesday – lunch, 2 coffee breaks, buffet dinner

Category	Price (inc VAT)
Conference fee	£255

PAYMENT METHOD

Registration will not be complete until payment has been received. All payments must be received before the start of the conference and in sterling.

By enclosed cheque (£ Sterling only) or bankers draft	
Bank transfer (Please quote registrant's name and event) (BARCLAYS BANK PLC: ACCOUNT NO: 10490881; SORTCODE: 20-06-05)	
Credit/Debit card (Visa/Mastercard/Access/Switch/Amex/Delta/Maestro)	
Please invoice my company (all payments must be received before the event) Please provide contact details for the finance department of your company; Contact name:Tel no:..... Email:.....	

Card noStart/Issue date. Expiry date.....ISSUE No Security Code.....

Total to be charged £

Signature

Please post, fax or email this entire form to:

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