Workshop Programme 2016p

Key-note Talks and WG1 Sessions
(8th of March, 09:00-18:00)

Session 1: Invited Speakers plus WG1 Oral Session

09:00 - 09:15	Welcome and Overview	J. Jones
09:15 - 09:45	Past and present of the GPS/GNSS Meteorology in Japan	Y. Shoji et al. (solicited)
09:45 - 10:15	Reanalysis and the ERA-CLIM2 Project	D. Schepers (solicited)
10:15 - 10:30	Numerical Weather Prediction Based Troposphere Correction Service for Real Time Precise Point Positioning	L. Yang et al.
10:30 - 11:00	Coffee Break	

Session 2: WG1 Oral Session

11:00 - 11:15	On troposphere delay stochastic modelling in precise real-time GNSS applications	T. Hadas et al.
11:15 - 11:30	Development of troposphere augmentation corrections and their use in GNSS positioning	J. Douša et al.
11:30 - 11:45	Station specific NWM based tropospheric parameters for the Benchmark campaign	F. Zus et al.
11:45 - 12:00	Simulations of delays and gradients: test of improvements and visualization tools in the frame of the Benchmark campaign	H. Brenot et al.
12:00 - 12:15	Global model for the conversion of ZWD to IWV	S. Rozsa et al.
12:15 - 12:30	Optimizing high-resolution troposphere estimates using PPP method and Benchmark data set	P. Václavovic et al.
12:30 - 14:00	Lunch	

Session 3: WG1 Oral Session

12:15 - 12:30	Near Real-Time Zenith Total Delay Estimations in TURKEY	G. Gurbuz et al.

14:00 - 14:15	Acquisition of PWV from TUSAGA-Active stations in the north west of Turkey	I. Deniz et al.
14:15 - 14:30	A Small Brother of GNSS4SWEC: Space Emergency System for Monitoring of Severe Weather Events in the Trans-Carpathian Region based on Real-Time GNSS Analysis	A. Kenyeres et al. Kablak N.
14:30 - 14:45	BENCH Status	J. Dousa et al.
14:45 - 15:00	BENCH STD Validation Results	M. Kacmarik et al.
15:30 - 16:00	Coffee Break	

Session 4: Poster Presentations

16:00 - 16:15	Near-Real-Time and Real-Time Zenith Tropospheric Delay Products at the University of Luxembourg: Recent Developments	N. Hadjidemetriou, W. Ding, N. Teferle and D. Laurichesse
16:15 - 16:45	WG1 Summary/Discussions	J. Douša, G. Dick
16:45 - 16:47	A Review of Selected Methods for the Outlier Detection in Climatological Time-Series	M.I Elias
16:47 - 16:49	Exploitation of NWM-derived tropospheric products in RTK positioning (Poster)	J. Paziewski et al.
16:49 - 16:51	Reprocessing of GFZ Multi-GNSS product GBM (Poster)	Z. Deng et al.
16:51 - 16:53	Near Real Time graphical representation of Tropospheric and Positioning products (Poster)	S. Katsougiannopoulos et al.
16:53 - 16:55	Determination of atmospheric water vapor using GNSS and InSAR measurements with comparison to numerical atmospheric models	F. Alshawaf and S. Hinz
16:55 - 16:57	An analysis of 16-year long datasets of GNSS measurements: IWV trends and diurnal cycle in Europe	H. Keernik and K. Rannat
16:57 - 16:59	On the impact of inhomogeneities in meteorological data on VLBI data analysis (POSTER)	R. Heinkelmann et al.
16:59 - 17:01	Evaluation of GNSS reprocessing tropospheric products using GOP-TropDB	J. Douša et al.
17:01 - 17:03	EPN Repro2: a reference tropospheric dataset over Europe.	R. Pacione
17:03 - 17:05	GPS Integrated Water Vapour Estimations Using Surface Temperatures from METEOSAT Satellite Data	Y. Reuveni and Y. Yair
17:05 - 17:07	Bridge SMS	I. Kerin

17:07- 18:30	Poster Session and Icebreaker	All

WG3 Sessions
(9th of March, 09:00-12:30)

Session 1: WG3 Oral Session

09:00 -09:15	Time variability of IWV datasets retrieved from IGS repro1, GOMESCIA satellite measurements and reanalyses	R. Van Malderen et al.
09:15 - 09:30	A reference IWV dataset combining IGS repro1 and ERA-Interim reanalysis for the assessment of homogenization algorithms	O. Bock
09:30 - 09:45	Water vapour variability in models, reanalysis and observations	U. Willen et al.
09:45 - 10:00	Time series analysis of GNSS and ERA-Interim precipitable water vapor data	F. Alshawaf et al.
10:00 - 10:15	Study of the 2007 heat wave in South-east Europe: anomalies and connections of IWV, temperature, precipitation and terrestrial water storage	M. Mircheva et al.
10:15 - 10:30	Comparison of atmospheric humidity and temperature profiles obtained by COSMIC satellites and radiosonde over Cyprus	C. Oikonomou
10:30 - 11:00	Coffee Break	

Session 2: WG3 Oral Session

11:00 - 11:15	Analysis Of Zenith Total Delay Time Series From Reprocessed GPS Solutions	A. Klos et al.
11:15 - 11:30	Statistical modeling of ZWD in GNSS processing - Implications for meteorology	S. Nahmani
11:30 - 11:45	Improved methods for reprocessing of GNSS data for climate monitoring over Poland	K. Stepniak et al
11:45 - 12:00	Screening of GPS ZTD estimates	P. Bosser and O. Bock
12:00 - 12:30	Influence of adopted GNSS processing strategy on long time changes in ZTD parameters.	Z. Baldysz et al.,
12:15 - 12:30	The IAG Working Group 'GNSS tropospheric products for Climate'	R. Pacione
12:30 - 14:00	Lunch	

General Sessions
(9th of March, 14:00-15:30)

Session 3: Splinter Meetings

14:00–14:30	WG3 Summary	O. Bock and R. Pacione
14:30 - 15:30	Sub-WG Splinter Meetings P. Václavovic - Real-time Demonstration campaign (RT1 PPP, RT, + WG2) H. Brenot - Asymmetry (+ WG2) R. Van Malderen & E. Pottiaux - Homogenisation methods intercomparison	
15:30 - 16:00	Bus from Rugbrauðsgerdin to Bessastadir	
16:00 - 17:00	Reception at Bessastadir, hosted by Mr. Olafur Ragnar Grimsson, President of Iceland. Group Photo	
17:00 - 17:30	Bus back from Bessastadir to Reykjavik	
17:30 - 22:00	Workshop Dinner	

WG2 Sessions
(10th of March, 09:00-12:30)

Session 1: WG2 Oral Session

09:00 - 09:20	Analysis of sea-effect initialised heavy snowfalls over the Northern Baltic Sea area	R. Kivi et al.
09:20 - 09:40	Monitoring fog at Sofia Airport using GNSS tropospheric products and Sofia Stability Index	A. Stoycheva et al.
09:40–10:00	Evaluation of NWP WRF model with GNSS-IWV during intense precipitation cases in Bulgaria	M. Slavchev et al.
10:00–10:20	Assimilation of GPS delays with COSMO-DE/Kenda	M. Bender et al.
10:20 - 10:30	On the progress in developing an observation operator for slant total delay in HARMONIE	S. de Haan

10:30 - 11:00	Coffee Break	

Session 2: WG2 Oral Session and feedback from Splinter Meetings

11:00 - 11:30	TBC	S. Krichak
11:30 - 11:45	Real-time Demonstration campaign (RT1 PPP, RT, + WG2)	P. Václavovic
11:45 – 12:00	Asymmetry (+ WG2)	H. Brenot
12:00 – 12:15	Homogenisation methods intercomparison	R. Van Malderen
12:15 - 12:25	Special Issue	R. Van Malderen
12:25 - 12:30	Sumer School, DONM and close of Workshop	G. Dick and J. Jones
12:30 - 14:00	Lunch	

MC Meeting
(10th of March, 14:00-17:00)

14:00 - 14:30	Action Overview	J. Jones
14:30 - 15:30	National Reports	All
15:30 - 16:00	Break	
16:00 - 16:15	Review of WG1 activities	G. Dick
16:15 - 16:30	Review of WG2 activities	S. De Haan
16:30 - 16:45	Review of WG3 activities	O. Bock and R. Pacione
16:45 - 17:00	AOB and close of meeting	J. Jones

A Small Brother of GNSS4SWEC: Space Emergency System for Monitoring of Severe Weather Events in the Trans-Carpathian Region based on Real-Time GNSS Analysis

Ambrus Kenyeres, Tivadar Horvath – FÖMI Satellite Geodetic Observatory, Hungary
Nataliya Kablak, Oleksandr Reity – Uzhhorod National University, Ukraine
Stepan Savchuk – Lviv Polytechnic National University, Ukraine
Gabor Bartha – University of Miskolc, Hungary
Igor Kudzej – Vihorlat Observatory, Slovakia
Gheorghe Radulescu, NordTech, TUCN, Romania

Abstract

EU, in the frame of the European Neighbourhood and Partnership Instrument (ENPI) has established dedicated opportunity to support valuable cooperation project proposals covering the cross-border regions of Ukraine, Slovakia, Hungary and Romania. The successful project proposal of the Uzhhorod National University (UA), IARDI (UA), University of Miskolc (HU), Vihorlat Observatory (SK) and NordTech (RO) is targeted at the monitoring of severe weather events in the Trans-Carpathian region based on the processing of data stemming from permanent GNSS stations situated in the concerned region. This region is just at the feet of the Carpathians, where due to the extensive forestry activity in case of heavy rain the flooding risk is high and a quick estimation of the precipitable water can help to issue warning in due time.

The project partners had installed new GNSS stations and meteorological sensors at the stations, agreed on free data exchange and established two GNSS Analysis Centres, one for NRT analysis and one for real-time monitoring of the GNSS-derived tropospheric parameters. The NRT analysis is being done at the SGO AC as sub-contractor of University of Miskolc. The results of this processing is regularly sent to E_GVAP, it is part of the SGO1 contribution.

The real-time tropospheric monitoring is being done at the Analysis Centre of Uzhhorod National University, where the modified GfZ monitoring software had been purchased and implemented.

The 2-year project has just terminated in the end of 2015. The monitoring is being continued and a new, extended project proposal is also planned.

The presentation gives a summary of the project, introduces the installed infrastructure and provides examples of the monitoring results.