Institute of Geodesy and Geoinformatics
Wrocław University of Environmental and Life Sciences

TOMOlab

The workshop on tomography and applications of GNSS observations in meteorology

Rapid development in the GNSS meteorology heralded by new GNSS constellations, precise real-time satellite orbits and clocks and large areas covered by GNSS permanent networks is advancing usage of GNSS satellite observations in meteorology. There are number of approaches to use GNSS-based data either as a one of the observation assimilated in numerical weather models or as a stand-alone product that could aid with weather studies. We invite all scientists, postgraduate students and professionals who are interested in a remote sensing techniques for weather applications to participate in this event.

Date

December 8, 2014

Venue

Didactic and Scientific Center
Grunwaldzki Square 24a
Faculty of Environmental Engineering and Geodesy
The Council Boardroom 018

Registration

tomolab@igig.up.wroc.pl

The successful implementation of GNSS data requires close cooperation between meteorologists and GNSS specialists. This workshop is a step forward in application of GNSS data to solve problems in weather forecasting and severe weather studies. Two major topics are going to be discussed:

1) assimilation of GNSS slant total delays in a numerical weather prediction models (project SONATA led by Dr Witold Rohm and Dr Maciej Kryza),
2) use of GNSS tomography models in weather studies (invited speaker from Belgian Institute of Space Aeronomy Dr Hugues Brenot).

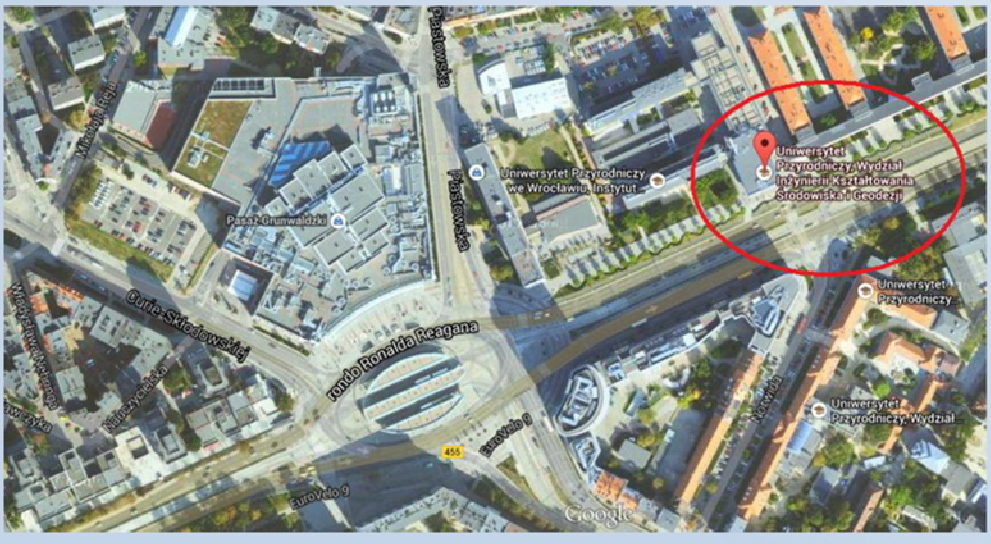
The workshop is split into two major sessions: lecture in the morning and practical class in the afternoon. The opening lecture will be given by Prof Jarosław Bosy head of GNSS&Meteo Working Group, introducing achievements and challenges of GNSS meteorology. Afterwards, the lecture in GNSS data processing, simulating and assimilating is going to be given (SONATA project team), this section is followed by introduction to tomography and tomography processing (Dr Hugues Brenot, Dr Witold Rohm). Closing talk is given by Dr Mieczysław Sobik addressing the severe weather studies problems. Practical session will demonstrate the capabilities of tomography models to monitor 3D structure of troposphere.

There is no admission fee, but we will be grateful if you could confirm your participation sending e-mail to LOC, refreshments are going to be served during the break. Should you have any further question do not hesitate to contact the Local Organising Committee.

Conference programme

09:00	–	**09:15**	**Inaugural lecture.** *GNSS meteorology* Prof Jarosław Bosy, Wrocław University of Environmental and Life Sciences
09:15	–	**09:30**	**Lecture 1.** *GNSS-based estimation of slant total delay towards the satellite* Dr Jan Kapłon, Wrocław University of Environmental and Life Sciences
09:30	–	**09:45**	**Lecture 2.** *GNSS signal raytracing* Dr Witold Rohm, Wrocław University of Environmental and Life Sciences Ms Karina Wilgan, Wrocław University of Environmental and Life Sciences
9:45	–	**10:15**	**Coffee Break**
10:15	–	**10:45**	**Lecture 3.** *GNSS tomography* Dr Hugues Brenot, Belgian Institute for Space Aeronomy
10:45	–	**11:00**	**Lecture 4.** *Assimilation of GNSS observations in numerical weather prediction models* Dr Maciej Kryza, University of Wrocław Ms Marta Stanek, University of Wrocław
11:15	–	**11:30**	**Lecture 5.** *Severe weather* Dr Mieczysław Sobik, University of Wrocław Dr Marek Błaś, University of Wrocław
11:30	–	**11:45**	**Lecture 6.** *Implementations of tomography based on BIRA model* Dr Hugues Brenot, Belgian Institute for Space Aeronomy
11:45	–	**12:00**	**Lecture 7.** *Implementations of tomography based on TOMO2 model* Dr Witold Rohm, Wrocław University of Environmental and Life Sciences
12:00	–	**13:30**	**Lunch Break**
13:30	–	**17:30**	**Workshop** *Tomographic calculations for active troposphere, visualization and experts comments* Dr Marek Błaś, University of Wrocław Dr Hugues Brenot, Belgian Institute for Space Aeronomy Dr Witold Rohm, Wrocław University of Environmental and Life Sciences Dr Mieczysław Sobik, University of Wrocław **Coffee will be available at all times**
17:30	–	**17:45**	**Closing keynotes**

Venue location



Local Organising Committee

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