



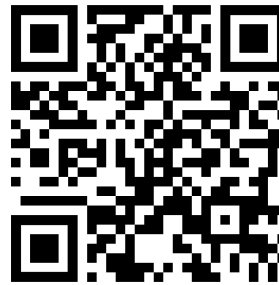
University of Luxembourg

The University of Luxembourg was established in 2003. It has grown to be a top 20 young university and is listed top 200 worldwide in the Times Higher Education World University Rankings 2016-2017. The University has three faculties and three interdisciplinary centers.

The University has nearly 6500 students, 850 scientific and research staff. Ever since its inception the University has maintained its multilingual, international and research-oriented commitment. For more details, visit <https://www.uni.lu/>

Contact

Felix Norman TEFERLE
Professor of Geodesy
Geodesy and Geospatial Engineering
Faculty of Science, Technology and Communication
University of Luxembourg, Campus Kirchberg
6, rue R. Coudenhove-Kalergi
L-1359 Luxembourg, Luxembourg
Email: norman.teferle@uni.lu



<http://vapour.lu/workshop>

Call for Participation *on* Improving GNSS & SAR Tropospheric Products for Meteorology

25–26 February, 2020

organised by



The Faculty of Science, Technology and
Communication
Campus Kirchberg, University of
Luxembourg

6, rue Richard Coudenhove-Kalergi
L-1359 Luxembourg

in association with



Luxembourg National Research Fund

Workshop organisers:

**Norman Teferle
and
Addisu Hunegnaw**

VAPOUR Project

The VAPOUR project is funded by the Luxembourg National Research Fund (FNR) to provide the next generation, space-geodetic, high-quality, tropospheric products (asymmetric Slant Total Delay, Zenith Total Delay and Horizontal Gradients) to improve numerical weather prediction (NWP) models for forecasting. VAPOUR will employ Global Navigation Satellite System (GNSS), and Synthetic Aperture Radar (SAR) observations. The advanced products will take better account of the distribution of atmospheric water vapour within the troposphere, which is directly linked to precipitation and weather. Most studies consider the delay experienced by SAR signals as a nuisance parameter and correct it by complicated modelling approaches. Instead, VAPOUR will derive maps of water vapour fields from these radar data and cross-evaluate them with those from GNSS.

The VAPOUR Consortium

The project is undertaken at the University of Luxembourg by Professor Felix Norman Teferle and Dr Addisu Hunegnaw with collaborators in Europe:

- **Prof. Gunnar Elgered**, Chalmers University of Technology, Earth and Space Sciences, Sweden
- **Prof. Ramon Hanssen**, Technical University of Delft, Geoscience and Remote Sensing, Netherlands
- **Dr. Jan Douša**, Geodetic Observatory Pecny, Czech Republic
- **Dr. Tim Springer**, PosiTIm GmbH, Germany
- **Prof. Pascal Bouvry**, High Performance Computing, University of Luxembourg

About the Workshop

The University of Luxembourg VAPOUR team is organizing an international workshop on the meteorological application of GNSS and SAR, which is scheduled for **February 25 - 26, 2020**, Luxembourg. The objective of the workshop is to explore and discuss the recent advances in GNSS and SAR techniques in estimating tropospheric parameters to assist numerical weather prediction. Presentations (oral and poster) are solicited on the following topics.

- Session 1: Multipath effects on GNSS estimates of propagation delays due to the neutral atmosphere
- Session 2: Estimation of propagation delays and atmospheric water vapour fields from SAR observations
- Session 3: Assimilation of GNSS and SAR tropospheric products into NWP models and from tomography
- Session 4: Cross evaluation of GNSS and SAR tropospheric products

The workshop starts at 12:00 on February 25 and ends at 18:00 on February 26. Participants will have to make their own arrangements for transportation and accommodation. Further information will be provided closer to the event.

Venue of the Workshop

At the Interdisciplinary Centre for Security, Reliability and Trust (SnT), University of Luxembourg, **29 Avenue John F. Kennedy, 1855 Luxembourg**. Rooms: JFK-E00-004 (**METZ**) and JFK-E00-005 (**NANCY**).

How to register & submit your abstract

Please apply for workshop attendance at the URL given below. There you will also find the abstract submission form. <http://www.vapour.lu/workshop/>

Important Dates

Please submit your abstract at the latest by November 29, 2019.

Fee

The early-bird registration (before and on 29 November 2019) fee for the two days workshop is 150 €. Late or on-site registration will be charged at 200 €. We will provide coffee breaks, lunch and workshop dinner

How to get to the conference venue

The Campus Kirchberg of the University of Luxembourg is close to the Luxembourg International Airport and the main train station. From there take the bus (**line 16**) located in front of the main entrance of the airport to Kirchberg, LuxExpo station (7 minutes ride), then take a tram from Kirchberg LuxExpo station to Kirchberg Université tram station, see next page. If you opt taking the train to Luxembourg, you can reach the workshop venue by bus number **line 1** or **line 125** from the main train station "Luxembourg Gare centrale". The bus stop "Kirchberg, Coudenhove-Kalergi" is very close to the workshop venue.