

Latvia University of Life Sciences and Technologies





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University innovations in geodesy, status

View from the Universities of Latvia LLU and RTU and LU and VUAS

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EUREF symposium https://euref2021.si/

ZOOM; May 27, 2021

GNSS measurements performed at selected levelling points in the period



The concept of the digital twin, in RTU campus



Development of database and GIS system for the property management platform

Data from drones, scanners and LIDAR + virtual Reality in Kipsala





Reconfigurable space object optical tracking system of GGI – implementation stage

PostDoc project is realised by **Diana Haritonova** (JAN 2021 – JUN 2023) Institute of Geodesy and Geoinformatics (GGI), University of Latvia <u>diana.haritonova@lu.lv</u>

The project objective is to install and configure the optical tracking system of GGI and start its exploitation using for positional astrometric observations.





Nr. 1.1.1.2/VIAA/4/20/619



Investigation on accuracy improvement of automated zenith camera's VESTA deflection of vertical measurements

PostDoc project is realised by **Inese Varna** (JAN 2021 – JUN 2023) Institute of Geodesy and Geoinformatics (GGI), University of Latvia

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Anomalous refraction is the main limiting E-W (η) factor of precision of zenith camera's -0,9 VESTA deflection of vertical -1 measurements. -1,1

This project includes:

1) various experimental measurements for investigation of anomalous refraction phenomenon in zenith;

2) accuracy analysis in permanent test site over 2 years to estimate spatiotemporal properties of measured deflection of vertical values.



1.1.1.2/VIAA/4/20/666



Variations of xi and eta components in arcsec caused by anomalous refraction (12 h measurements), estimated using 45 min moving time window

Quasi-geoid model developed by **LU GGI in 2020** 25°



21.

24°

27°

Q-geoid model for Riga city, reference, RTU





- Quasi-geoid model accuracy assessment; 6 mm, after fitting;
- In total 21 GNSS/ levelling site used;
- Independent verification of the model at 6 points not included in the calculation.

https://www.lgia.gov.lv/lv/rigas-kvazigeoida-modelis-0



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Ventspils University of Applied Sciences VUAS



For mutual co-operation between Latvian higher education institutions and coordinated development of future missions together with production, incl. VZD, LGIA.

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