

Sergei Rudenko, Dr.

CURRENT POSITION

Research Associate
Deutsches Geodätisches Forschungsinstitut (DGFI-TUM)
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EDUCATION / DEGREES

- 2000 Dr. (doctoral degree, Ph.D.) Astronomy and celestial mechanics, Main Astronomical Observatory, National Academy of Sciences of Ukraine, Kiev, Ukraine
- 1988 Diploma degree, Astronomy, St. Petersburg University, St. Petersburg (Leningrad), Russian Federation
- 1983 School leaving examination, Swobodnyj, Russian Federation

MAIN RESEARCH AREAS

- Space geodesy, celestial mechanics, astrometry
- Precise orbit determination (POD) of the near-Earth artificial satellites: low orbit, altimetry, geodetic, GPS, geostationary
- Studies on terrestrial reference frames, Earth's gravity field, and thermospheric density

EXPERIENCE

- since 2016 Research Associate at the DGFI-TUM, Munich, Germany
Research focus: POD of Low Earth's Orbiting (LEO) satellites using Satellite Laser Ranging (SLR) and DORIS observations; improvement of thermospheric density models using SLR observations of LEO satellites; evaluation of the quality of new Terrestrial Reference Frame (TRF) realizations and Earth's gravity field models.
- 2014-2016 Project Scientist at the Helmholtz Centre Potsdam, GFZ German Research Centre for Geosciences, Potsdam, Germany
Research focus: investigations of new models, algorithms and reference frames for POD of altimetry satellites using SLR and DORIS observations
- 2013-2014 Research Scientist at the Technical University Berlin, Berlin, Germany
Research focus: development of satellite dependent models for POD of altimetry satellites
- 2001-2013 Project Scientist at the Helmholtz Centre Potsdam, GFZ German Research Centre for Geosciences, Potsdam, Germany
Research focus: POD of altimetry satellites using SLR, DORIS, PRARE, Doppler and altimetry observations; simulation study on TanDEM-X precise baseline vector determination based on the use of GPS data; software elaboration and determination of weekly positions of GPS stations globally located at or near tide gauges from the analysis of GPS data
- 1988-2001 Research Scientist, engineer and post-graduate student at the Main Astronomical Observatory, National Academy of Sciences of Ukraine, Kiev, Ukraine
Research focus: development of a software for geostationary satellite orbit determination, determination of orbits of geostationary satellites; determination of Earth Rotation Parameters and TRF realizations, precise orbit determination of satellites Lageos-1 and Lageos-2 using SLR observations of a global network

MEMBERSHIP

- Associate of the International Laser Ranging Service (ILRS) (1995-2001 at the Main Astronomical Observatory of the National Academy of Sciences in Kiev, 2001-2016 at the GFZ Analysis Center, and since 2016 at the DGFI-TUM Analysis Center)
- Member of the DORIS Analysis Working Group (AWG) of the International DORIS Service (IDS) (since 2011)
- Responsible for the IDS Associate Analysis Center at DGFI-TUM (since 2019)
- A member of the IAG-IERS Joint Working Group 1.2.4: Evaluation of the terrestrial reference frames (since 2024)
- European Geosciences Union member (since 2006)

PUBLICATIONS, PRESENTATIONS, STUDENT SUPERVISION

- The main author and co-author of more than 30 scientific peer-reviewed publications (1988-2024).
- The complete list of publications and presentations given at national and international scientific conferences is available at <https://www.dgfi.tum.de/en/staff/rudenko-sergiy/>.
- The list of important publications is available also at <https://orcid.org/0000-0001-5149-3827>.
- Research Gate web page: <https://www.researchgate.net/profile/Sergei-Rudenko/>
- Web of Science profile: <https://www.webofscience.com/wos/author/record/H-4478-2017>
- Supervision of a master student (2022-2023) and five ESPACE students at TUM (2020-2024).

Date: December 10, 2024