

Open Position at the Astronomical Institute of the University of Bern

The Astronomical Institute of the University of Bern (AIUB) is currently in the grant preparation phase with the European Commission to launch the project

Unifying the three pillars of geodesy using space ties (SPACE TIE)

in response to the European Research Council (ERC) Consolidator Grant Call 2018 of the Horizon 2020 European Union Framework Programme for Research and Innovation. In the frame of the SPACE TIE project funding will be available for a

RESEARCH ASSISTANT (Position No. 1)

SPACE TIE shall pave the way to unify the “three pillars” of Geodesy in future realizations of the terrestrial reference frame by connecting satellite geodetic techniques, in particular Global Navigation Satellite Systems (GNSS) and Satellite Laser Ranging (SLR), by co-location sites in space. These so-called space ties shall be realized on satellites of the currently existing space infrastructure, as well as on satellites due for launch in the near future. This includes the Medium Earth Orbits (MEO) of the GNSS satellites and, in particular, satellites in Low Earth Orbits (LEO) with GNSS and SLR co-located on-board. To maximize the sensitivity to the Earth’s gravity field, the ultra-precise inter-satellite ranging between LEO satellites of dedicated gravity missions shall be added as a third satellite geodetic technique.

The position of the research assistant is scheduled for three years and will be crucial to link the various work packages of the SPACE TIE project. The tasks of the research assistant will focus on the combination of terrestrial and LEO GNSS data in global solutions, the rigorous calibration of LEO receiver and GNSS transmitter antennas, and the combination of the resulting normal equations with results from fully consistent SLR and gravity field analyses. Significant effort shall be devoted on technical upgrades of the Bernese GNSS Software for new orbit and parameter handling tools to realize the unification of the “three pillars” in global solutions. The activities will be performed in collaboration with the Center for Orbit Determination in Europe (CODE), one of the global analysis centers of the International GNSS Service (IGS).

Education:

The candidate is expected to have successfully completed a Ph.D. thesis in astronomy, geodesy, physics, or a related topic. Experience in GNSS data processing, SLR data processing, global gravity field determination, or using the Bernese GNSS Software package, and in computer science (coding in Fortran90, C++, Python, or Perl) are not a requirement, but an advantage. The candidate should speak and write English fluently.

The candidate should start working in Bern on May 01, 2019.

The position is scheduled for three years with an option for an extension to five years. The salary follows the guidelines of the University of Bern and depends on the qualification of the successful candidate.

Application:

Applications (including CV, university diploma copies, record of study, possible references) should be received as soon as possible but no later than February 3, 2019 at the following (first) address:

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Informal inquiries may be obtained at both of the above addresses.

The University of Bern is an equal opportunity employer and encourages in particular women to apply for open positions.