



The Rheinische Friedrich-Wilhelms-Universität Bonn is an international research university that offers a wide range of degree programs. With 200 years of history, about 38,000 students, over 6.000 employees, and an excellent domestic and international reputation, Bonn University is among Germany's leading universities. It was awarded the status of a University of Excellence in 2019.

Starting at the earliest date possible and limited to a fixed contract of three years, the Geodetic Earth System Research Group within the Institute of Geodesy and Geoinformation is seeking a

## PhD Student in Ocean Circulation Modeling (75%)

The position has been opened in the frame of the DFG-funded project "Atlantic Meridional Overturning Circulation: Inferences from Satellite Gravimetry and Numerical Ocean Models for North Atlantic Deep Water Transports (AMOCING)", a sub-project of the DFG Research Unit "New Refined Observations of Climate Change from Spaceborne Gravity missions (NEROGRAV)". NEROGRAV aims to improve the accuracy and consistency of satellite-based mass transport estimates in the Earth system to increase the science return of satellite gravimetry in various fields of applications. Sub-project AMOCING particularly focuses on the detectability of ocean bottom pressure (OBP) signatures of the meridional overturning circulation in the North Atlantic. We will use state-of-the-art gravity field estimates, climate model simulations and adjoint modeling tools to characterize – and improve the understanding of – the relevant OBP and circulation signals on interannual time scales. The work will be performed in close collaboration with Dr. Henryk Dobsław (GeoForschungsZentrum Potsdam).

- Your tasks:
- Statistical analysis of North Atlantic OBP variations in available coupled climate simulations (CMIP6 archive) and monthly gravity fields
  - Adjoint gradient decomposition of OBP variations using a general circulation model
  - Comparison of numerical model results with geodetic observations
  - Communication of results at international conferences and in journal papers

- Your qualifications:
- M.Sc. in Physics, Oceanography, Geodesy, or a related discipline
  - Strong physical and mathematical background and initial experience in working with numerical models in high performance computing environments
  - Proficiency in programming (e.g., Fortran, python)
  - Motivation to work in an interdisciplinary and highly international team
  - Excellent writing and communication skills in English

- We offer:
- Ambitious and varied tasks in a dynamic and international research environment
  - Participation in the university-wide pension system (VBL)
  - Access to the extensive university sports program
  - A good transport infrastructure with the opportunity to obtain a discounted employee ticket for public transportation (VRS) or to use assigned, affordable parking
  - A salary based on the 13 TV-L scale (part time 75%)

**The University of Bonn is committed to diversity and equal opportunity. It is certified as a family-friendly university. It aims to increase the proportion of women in areas where women are under-represented and to promote their careers in particular. It therefore urges women with relevant qualifications to apply. Applications will be handled in accordance with the Landesgleichstellungsgesetz (State Equality Act). Applications from suitable individuals with a certified serious disability and those of equal status are particularly welcome.**

Inquiries and **applications** (CV, letter of motivation, list of publications and similar activities, certificates, expected availability date, and recommendation letter(s) and/or reference contacts) should be sent **by 10.07.2022** to Prof. Michael Schindelegger, University of Bonn, Institute of Geodesy and Geoinformation (mschinde@uni-bonn.de) with the **application code 51/22/3.202**. Before sending your application, please combine and convert all of your documents into one PDF file.