



A new Research Training Group (RTG) entitled “Geophysical modelling of vertical motion processes constrained by geodetic and geological observations (UPLIFT)” will be established at the Technical University of Munich (TUM) and the Ludwig-Maximilians-Universität (LMU) München under the auspices of the Munich GeoCenter. Funded by the German Research Foundation (DFG), the RTG aims to understand and quantify uplift mechanisms of the continental lithosphere in an interdisciplinary approach involving geophysics, geodesy, geology, geomorphology, mathematics and computer science.

We invite applications for

10 Doctoral Positions and one Research scientist (all positions are full-time and fully funded)

10 doctoral candidate positions (for a period of 3 years) and 1 Post-Doctoral position (for a period of 4.5 years) can be filled **starting in April 2022**. The salary is according to working time and qualification (TV-L E13/E14, 100%).

The doctoral positions cover the following topics (supervisors in brackets):

1. Determination of contemporary uplift rates from geodetic observations (Prof. Urs Hugentobler, Prof. Xiaoxiang Zhu)
2. Interpretation of gravity and gravity changes in light of uplift processes (Prof. Roland Pail, Prof. Hans-Peter Bunge)
3. Magnetostratigraphy and geology of Cenozoic sections related to the Columbia River-Yellowstone plume system (Prof. Stuart Gilder, Prof. Anke Friedrich)
4. Sedimentologic, stratigraphic, and morpho-tectonic mapping of the western North American Cordillera bearing on its broad-scale uplift history (Prof. Anke Friedrich, Prof. Stuart Gilder)
5. Linking of seismic tomography and geodynamic Earth models (Prof. Heiner Igel, Dr. Bernhard Schuberth)
6. Adjoint geodynamic model enabled by high-performance computing (Prof. Hans-Peter Bunge, Prof. Dieter Kranzlmüller)
7. Transient landscape evolution through response models to plate and plume mode (Prof. Michael Krautblatter, Prof. Anke Friedrich)
8. The Lithospheric transfer function (Prof. Hans-Peter Bunge, Prof. Roland Pail)
9. Model adequacy under uncertainty (Prof. Barbara Wohlmuth, Dr. Laura Melas)
10. Curation of data for interactive visualization of the coupled dynamic Earth models (Prof. Dieter Kranzlmüller, Dr. Markus Wiedemann)

The Post-doc position performs an interdisciplinary and integrative role and covers the topic

- Data integration, model interfaces and knowledge transfer

The new RTG will provide a tailored qualification and study programme at two of Germany’s excellence universities, including topic-related lecture series, workshops, advanced course work, retreats, seminars, and geological excursions in an interdisciplinary, international and family-friendly environment, hosted in the vibrant city of Munich.

Your qualification

- Master's degree of an academic university in geosciences, geodesy, geophysics, geology, physics, aerospace engineering, computational science and engineering, mathematics or related fields
- Ideally, cross-disciplinary competences among involved disciplines
- Knowledge of an advanced programming language or special geological skills and field experience
- Excellent English skills
- Willingness to collaborate with other members of the Research Training Group and external partners
- Documented aspirations to become a leader in your chosen field of research

We are committed to generating a vibrant and diverse research community by recruiting a gender-balanced, international and interdisciplinary cohort.

Your application:

To apply please submit the following documents:

- your CV (with digital copies of any authored scientific publications, if applicable),
- details of your BSc and MSc, including copies of academic transcripts and a pdf copy of your MSc thesis or relevant publications,
- a motivation letter, including a statement explaining your research interests and preferred choice of project(s) and advisor(s) (including your rationale for that choice), and
- the names and contact details of three references that may be contacted for a recommendation letter

to the application portal:

<https://www.efv.verwaltung.uni-muenchen.de/uplift>

In case of questions, please contact the Head of the search committee and Speaker of the RTG Prof. Dr. Roland Pail (roland.pail@tum.de), or the potential supervisor(s) of your topic of interest given above.

Applications that are submitted by **January 21th, 2022** will be given full consideration but later applications will be considered if the positions are not yet filled.

As part of your application, you provide personal data to the Technical University of Munich (TUM). Please view our privacy policy on collecting and processing personal data during the application process pursuant to Art. 13 of the General Data Protection Regulation of the European Union (GDPR) at <https://portal.mytum.de/kompass/datenschutz/Bewerbung/>. By submitting your application you confirm to have read and understood the data protection information provided by TUM.