

# Call for applications: 10 PhD positions



The Research Training Group (RTG) entitled “Geophysical modelling of vertical motion processes constrained by geodetic and geological observations (UPLIFT)” exists at the Technical University of Munich (TUM) and the Ludwig-Maximilians University (LMU) Munich under the auspices of the Munich GeoCenter. Funded by the German Research Foundation (DFG), the research of 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** (all positions are full-time and fully funded) for a period of 3 years starting in April 2025.

The positions are as follows:

- P1: Integrated contemporary horizontal and vertical velocity field of the Basin-and-Range province and adjacent regions using GNSS (GPS) and InSAR;
- P2: Signal separation of temporal gravity signals for constraining geodynamic models and landscape evolution models;
- P3: Relating magnetic anisotropy to uplift through modern-day case studies;
- P4: Testing mantle convection models using continent-scale geological records;
- P5: Strategies for including resolution and uncertainty information from seismic tomography in geodynamic Earth models;
- P6: Constraining geodynamic models by geodetic and geological information;
- P7: A novel multilayer, non-diffusive landscape evolution model linked to geodynamic and geodetic signals discriminating plate and plume mode;
- P8: Analysis of space-time patterns of active faulting in intraplate settings affected by plate- and plume-mode mantle convection;
- P9: Model adequacy under uncertainty;
- P10: Interactive visualisation of complex Earth models.

The 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;
- 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) (including your rationale for that choice); and
- the names and contact details of three references that may be contacted for a recommendation letter

to: **[uplift-applications.iapg@ed.tum.de](mailto:uplift-applications.iapg@ed.tum.de)**

In case of questions, please contact the Head of the search committee and Spokesperson of the RTG Prof. Dr. Roland Pail ([roland.pail@tum.de](mailto:roland.pail@tum.de)), and/or the potential supervisor(s) of your topic of interest (see <https://www.asg.ed.tum.de/iapg/uplift/cohort-2/>).

Applications that are submitted by November 30th 2024 will be given full consideration and 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.