PhD in Earth Sciences, Paleo-altimetric record of the Tibetan Plateau (M/F)



https://www.paleoenvironment.eu/wordpress/tibetop-phd-position/







Application Deadline Dec 1, 2024

Number of position : 1 Workplace : mainly in NANCY (GeoRessources Lab) + visits to Aix-en-Provence (CEREGE Lab) and Rennes (Geosciences department) Contract Period : 36 month Expected date of employment : 15 April 2025 Proportion of work : Full time Remuneration : ca. 2000 euros (net) monthly Degrees and skill requirements: Master degree in Geosciences

Mission: The GeoRessources lab (Université de Lorraine) seeks to recruit a highly motivated PhD student to combine paleoaltimetry and fluid-rock-deformation interactions in fossil hydrothermal systems within the ANR-funded **TIBETOP** Project (Tibetan Plateau Paleo-Topography).

TIBETOP investigates the growth of the Himalaya Tibetan orogen during the India-Asia collision, a highly controversial topic involving the world's best Earth Science group to test emerging tools and approaches beyond the state of the art. The successful candidate will acquire unique field experience in Tibet to develop new approaches to unravel the longstanding conundrum on the timing and mechanisms of the formation of the Tibetan Plateau that stands out as a major challenge to the international community. The candidate will receive a multidisciplinary training in the laboratory and in the field (structural analysis). He/she will be trained in well-established methods and emerging techniques at the forefront

of technology in geochemistry and geochronology. She/He also may have the opportunity to develop skills in numerical modeling.

Activities: TIBETOP has 3 work packages (WP) to investigate the paleogeography of the India-Asia collision zone. The candidate in Nancy (GeoRessources lab) will work on the WP2 focusing on paleoaltimetry reconstructions using hydrous metamorphic/altered silicates from fossil hydrothermal systems (including mylonites from shear zones) as well as minerals from brittle structures. This will involve to conduct a multidisciplinary multi-scale approach combining petrostructural analysis (including EBSD, EPMA,...), stable isotope geochemistry, and geochronology and apply new isotope-based paleoaltimetry methods on key proxies. The candidate will collaborate in the field and laboratory with the project of the postdoctoral researcher at Geosciences Rennes in WP1 focusing on estimating paleoelevations from basins on the Tibetan Plateau. The candidate will join the interdisciplinary effort to reconstruct the paleogeography of the India-Asia collision zone in collaboration with climate, landscape, geodynamic and biotic modelliers associated to this project (Geosciences Rennes, Cerege, CRPG, Chinese Academy of Sciences, Beijing). They will disseminate outputs of the project in the publication of high impact articles, FAIR databases and through the participation of international conferences and outreach activities.

Skills: We expect candidates with a strong background in Earth Sciences. Skills in structural geology, tectonics and microtectonics, metamorphic petrology, isotope geochemistry, and geochronology. Excellent communication skills, team spirit, and an ability to work in autonomy are essential; open science experience is highly valued, as well as an appetite for multidisciplinarity and the ability to think outside of the box. Good English level, both spoken and written, is required.

Work context: The candidate will integrate an international multidisciplinary team around the **TIBETOP** project with 8 faculty, another postdoc directly related to the project. GeoRessources (Université de Lorraine) has been created in 2013 but has been anchored for a long time in Nancy, making it a well-known laboratory on the international scale. The GeoRessources laboratory brings together researchers, teacher-researchers, and technical staff from various disciplines and backgrounds (geology, structural geology, geochemistry, mechanics, process engineering, modeling, etc.). It is based on a substantial analytical and experimental park inserted in a local, regional and national landscape in perpetual evolution developing labels, networks, etc. GeoRessources develops an extremely active training activity "to and through research" in close collaboration with Université de Lorraine Earth and Environment Observatory OTELO, an Observatory of Universe Sciences (OSU) that brings together 4 research units: 2 joint CNRS INSU units (CRPG UMR 7358, GeoRessources UMR 7359), 1 joint CNRS INSU-INEE unit (LIEC UMR 7360), and 1 joint INRAE unit (LSE UMR 1120).

These expertise and facilities are complemented by the partner institutes comprising Geosciences Rennes (Rennes), CEREGE (Aix-en-Provence) and the institute of Tibetan Plateau Research (Chinese Academy of Sciences, Beijing).

Application: Please send to <u>aude.gebelin@univ-lorraine.fr</u> and <u>guillaumedn@gmail.com</u>

1. A complete CV, 2. A 1-page cover letter explaining how you fit the requirements mentioned above, 3. A summary of the MSc thesis, and 4. Contact information of three references.

Postdoctoral researcher in Earth Sciences (M/F): Paleo-altimetric and stratigraphic records of Tibetan Plateau growth









Application Deadline Dec 1, 2024

Reference : UMR6118-ANRTIBETOP_Postdoc Number of position : 1 Workplace : RENNES Date of publication : 28 October 2024 Type of Contract : FTC Scientist Contract Period : 24-36 months Expected date of employment : March-June 2025 Proportion of work : Full time Remuneration : <u>CNRS grid for postdoc researcher</u> depending on experience Desired level of education : PhD in Earth Sciences (Doctorate) Experience required : PhD in Earth Sciences.

Mission: The Paleoenvironment team of Géosciences Rennes (Rennes University) seeks to recruit a highly motivated postdoctoral researcher to combine paleo-altimetry and stratigraphy within the <u>ANR</u>-funded **TIBETOP** Project (*The Tibetan-Himalayan paleo-topography*). **TIBETOP** investigates the growth of the Tibetan-Himalayan orogen during the

India-Asia collision. This is a highly controversial topic involving the world's best Earth Science group to test emerging tools and approaches beyond the state of the art. The successful candidate will acquire unique field experience in Tibet and develop new approaches to unravel the longstanding conundrum on the timing and mechanisms of the formation of the Tibetan Plateau. The candidate will have the opportunity to develop skills in quantitative and laboratory techniques, database management and numerical modeling. Candidates will acquire intersectoral-relevant hard and soft skills, in particular in the field of resources with international industrial partners. If interested, the candidate may participate in the teams' activities in (co)advising master and PhD students and/or teaching.

Activities: TIBETOP has 3 work packages (WP) to investigates the paleogeography of the India-Asia collision zone. The candidate in Rennes will work on WP1 focusing on basins on the Tibetan Plateau that have recorded its growth. This will involve revising the stratigraphy and depositional environments of these basins and applying new isotope-based paleo-altimetry methods on key strata. The candidate will collaborate in the field and laboratory with the PhD at GeoRessources (Nancy) and associated expert staff in WP2 focused on estimating paleoelevations of exhuming massifs recorded in silicates neo-formed during fault activity. The candidate will join the interdisciplinary effort to reconstruct the paleogeography of the India-Asia collision zone in collaboration with climate, landscape, geodynamic and biotic modellers associated to this project. The candidate will learn to disseminate outputs of the project in the publication of high impact articles, FAIR databases and through the participation of international conferences and outreach activities. High impact is ensured by the topic that stands out as a major challenge to the international community.

Skills: We expect candidates with a strong background in Earth Sciences. Skills in sedimentology, stratigraphy, paleomagnetism, isotope geochemistry, basin analyses and structural geology are particularly relevant. Experience in field data acquisition and laboratory analyses will be directly useful for the project but numerical modeling and database management will constitute important additional skills. Excellent communication skills, team spirit, and an ability to work in autonomy are essential; open science experience is highly valued, as well as an appetite for multidisciplinarity and the ability to think outside of the box. Fluent English, both spoken and written, is required.

Work context: The candidate will integrate an international multidisciplinary team around the **TIBETOP** project with 8 faculty, another postdoc and 1 PhDs directly related to the project. In Rennes, the project is part of the vibrant <u>Paleoenvironment group</u> composed of ca. 20 people at the heart of the <u>Géosciences Rennes</u> research focus. It involves researchers in related fields of sedimentology, paleogeography, stratigraphy, paleontology, tectonics, Earth Surface processes and top-notch associated tools (paleomagnetism, thermochronology, geochemistry and all radiochronologic facilities). Expertise and facilities available to the candidate are complemented by the direct partner institutes comprising Géoressources (Nancy), CEREGE (Aix-en-Provence) and the institute of Tibetan Plateau Research (Chinese Academy of Sciences, Beijing).

Application: Send to guillaumedn@gmail.com and aude.gebelin@univ-lorraine.fr:

- a complete CV,
- a max 2-page cover letter explaining how you fit the requirements mentioned above,
- a sample of your own writing (e.g., a publication you wrote),
- contact information of two references.