

Job Vacancy Available

Marie Skłodowska-Curie actions Innovative Training Network (ITN-ETN) "BASE-LiNE Earth"

We invite applications to undertake competitive high-level research on the complex Phanerozoic seawater history through the determination of original proxy information preserved in reliable ancient geological archives like fossil brachiopods using cutting edge technologies and experimental approaches within the Marie Skłodowska-Curie Innovative Training Networks (ITN-ETN) »*Brachiopods As Sensitive tracers of gLobal mariNe Environment: Insights from alkaline, alkaline Earth metal, and metalloid trace element ratios and isotope systems*«. BASE-LiNE Earth is funded through the HORIZON2020 program of the European Union and consists of 14 full partners and seven associated partners out of 11 countries (Austria, Australia, Canada, Czech Republic, Denmark, France, Germany, Israel, Italy, Poland, Slovak Republic) among them internationally leading researchers in the field of geology, chemistry and isotope geochemistry, marine biology and ecology as well as numerical modelling and engineering.

The project is coordinated at the GEOMAR Helmholtz Centre for Ocean Research Kiel, Germany. BASE-LiNE Earth will run until December 2018.

All positions offered are full-time and fixed term for 3 years. Successful applicants will benefit from training and networking program delivered jointly by academic and non-academic partners. As a result, BASE-LiNE Earth fellows will gain both, research experience and complementary skills such as career planning, communicating science, and management techniques. Researchers will mainly work in their host institution, but they will also have the possibility to visit another BASE-LiNE Earth partner for secondment activities, which could be either in academia or in industry. On completion of their fellowship, successful applicants are expected to be among the future leaders in their respective fields. The Researchers recruited for these positions are expected to be an active part within the BASE-LiNE Earth consortium by participating in network wide activities such as workshops and conferences. The candidate will be part of an international, interdisciplinary team at universities and research institutions, and is expected to attend the actions as announced in the proposal.

In order to strengthen the role of women in science the application of females for an ESR position is strongly encouraged. Handicapped persons with comparable qualifications receive preferential status.

Please submit your complete application (including a CV [max. 3 pages], a letter of motivation for the position and a statement of your research interests [max. 1 page], relevant certificates, plus contact details of at least two referees) to the contact below quoting **BASE-LiNE Earth_ESR15**. CLOSING DATE: Open until the position is filled.

ESR15

Data Evaluation of High Mass Resolution Isotope Ratio Measurements of Complex Molecules

CONTACT: Claudia Bouman Thermo Fisher Scientific (Bremen) GmbH, Germany, e-mail: claudia.bouman@thermofisher.com

SHORT DESCRIPTION

Clumped isotope ratio mass spectrometry applied to molecular species opens the door to address new applications in paleoceanography, marine biogeochemistry, biomedicine, isotope forensics and maybe also to study of metabolic processes. However, the complexity of the high mass resolution mass spectra requires new evaluation strategies as well as the development of innovative analytical protocols to utilize and to extract all information accessible from the mass spectrum.

FULL JOB DESCRIPTION

The determination of seawater temperature is crucial to understand trace element partitioning and isotope fractionation in marine organic and inorganic carbonates. In this regard the recent development of the clumped isotope measurement technique offers the possibility to determine seawater temperatures without the knowledge of seawater's original isotope composition. With the event of high mass resolution isotope ratio mass analyzers site specific isotope ratio analysis of more complex molecular species can be reached but has yet to be developed.

Because of the complexity of the high mass resolution mass spectra new evaluation strategies like multidimensional data analysis are required. There is the need to extract and to evaluate all information accessible from the complex mass spectra including corrections for interfering molecular species which cannot be resolved by mass spectrometry and modeling of the expected mass spectra. New workflows and analytical protocols need to be developed to utilize and to extract all information accessible from the mass spectrum.

The development will be founded on our platform software suite "Qtegra" which has been built on latest technologies such as .NET 4.5. The programming language will be C# supported by professional numerical libraries e.g. 'Extreme Optimization'. The team works in an agile manner according to the "SCRUM" method which is based on a strong team approach. In order to support this challenge we are seeking for a scientist with background in numerical mathematics, techno-mathematics or informatics.

The project is embedded to the *BASE-LiNE Earth* project which will benefit from the close interaction of mass-spectrometer users and developers. Secondments at other institutions linked to the *BASE-LiNE Earth* project will be available.

This position offers the possibility for a consecutive dissertation at the Faculty of Mathematics and Natural Sciences of the Kiel University, Germany.

Qualifications:

As a successful candidate you should have

- A MSc degree in a relevant field such as informatics, numerical mathematics, mathematics, physics, bio-informatics.
- The ability to work in an internationally-oriented environment
- A broad interest in geosciences, and the willingness and capacity to work independently
- The willingness to travel
- You should be fluent in oral and written English, since the host group is highly international in composition and publication aims

- Willingness to work in an interdisciplinary team and to cross borders from geo sciences to life sciences and theoretical modeling.

Employment conditions:

The position is offered for three years full-time position, starting summer/ autumn 2015. The contract is hosted for the first 1,5 years by Thermofisher Scientific (Bremen) GmbH with working location in Bremen; followed by a 1,5 years contract with GEOMAR Helmholtz Center for Ocean Research Kiel, Germany.

In accordance with the Marie Skłodowska-Curie rules, the salary will be calculated as follows:

Annual salary*: ~44.000 € plus in case of family obligations** additionally 6000,-€.

* This amount is based on the relevant budget concerning the employment of the EU-Researcher. After deduction of the employer's social insurance share, it amounts to the gross salary for the activity. Employees gross salary includes taxes, social security, insurance, pension summing up the following:

1. The Living Allowance is a gross EU contribution to the salary costs of the researcher, calculated individually for each European country. "The net salary results from deducting all compulsory (employer/employee) social security contributions as well as direct taxes (e.g. income tax) from the gross amounts. The final amount will not change during the secondment activities. The primary host will ensure that the researcher is covered under the social security scheme. During the secondment the social security provision will also cover the researchers during this period." (Ref: Guide for Applicants, Marie Skłodowska-Curie Actions).
2. The Mobility Allowance: All eligible researchers recruited within an ETN/ITN are entitled to receive this allowance. It contributes to the expenses of the researcher caused by the mobility. The amount of the mobility allowance is specified in Table 3 of the MSCA Work Programme and for the calls 2014-2015 it amounts to €600 per month." (Ref: Guide for Applicants, Marie Skłodowska-Curie Actions). According to the country-specific requirements this amount may be subject to taxation.
3. Family Allowance of €500 per month will be paid should the researcher be eligible for this allowance. See ** below.

** In this context, family is defined as persons linked to the researcher (i) by marriage, or (ii) a relationship with equivalent status to a marriage recognised by the legislation of the country where this relationship was formalised; or (iii) as dependent children who are actually being maintained by the researcher. The family status of a researcher will be determined at the time of their (first) recruitment in the project and will not evolve during the project lifetime." (Ref: Guide for Applicants, Marie Skłodowska-Curie Actions).

In order to be eligible, each applicant must simultaneously fulfil the following criteria at the time of recruitment:

- **Mobility:** At the time of recruitment, the applicant must not have resided or carried out his/her main activity (work, studies, etc...) in the country of the host organization for more than 12 months in the 3 years immediately prior to his/her recruitment. Compulsory national service and/or short stays such as holidays are not taken into account.
- **Qualifications and research experience:** The applicant must fulfil the requirements defined for Early Stage Researchers (ESRs): ESRs are researcher who, at the time of recruitment, has **NOT yet been awarded the doctorate degree** and is in the first 4 years (full-time equivalent) of his/her research career.

Additional information on *BASE-LiNE Earth* and further job descriptions can be found on our website, <https://www.baseline-earth.eu/>.