Międzynarodowa Środowiskowa Szkoła Doktorska
przy Centrum Studiów Polarnych
w Uniwersytecie Śląskim w Katowicach

ul. Będzińska 60
41-200 Sosnowiec
tel. +48 32 368 93 80
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Title of PhD project: Palaeogeographic and tectonic evolution of eastern Svalbard based on palaeomagnetic investigations of selected Neoproterozoiic sections of Ny Friesland and Nordaustlandet.

The leading unit: Institute of Geophysics Polish Academy of Sciences

Requirements:

1. Completed a full university degree (Msc), graduated in geology or geophysics (preferable specializations: stratigraphy, sedimentology).
2. Very good mathematical skills (ability to learn statistical software, computer programs dedicated to paleomagnetism and rock magnetic analyses).
3. Very good knowledge of English (spoken and written).
4. Very good communication and presentation skills.
5. Good physical condition (necessary to take a part in demanding polar expedition).

Tasks description:

1. Taking a part in E Svalbard fieldwork.
2. Conducting of palaeomagnetic experiments at IG PAS (E Svalbard sites)
3. Conducting rock-magnetic investigations at IG PAS (E Svalbard samples)
4. Processing the results of palaeomagnetic and rock-magnetic experiments.
5. Taking a part in petrological and mineralogical analyses at FG UW (E Svalbard samples)
6. Interpretation of interdisciplinary rock-magnetic –petrological-mineralogical investigations results (E Svalbard sites).
7. Preparing publications.

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Abstract:

The Ph.D. position is an integral part of the National Science Center project OPUS entitled: „Rate of tectonic plates movement in neoproterozic time - verification of neoproterozoic true polar wander hypothesis" (Akronym: NEOMAGRATE, agreement reg. number UMO-2021/41/B/ST10/02390). The main objectives of the NEOMAGRATE grant are as follows.

The Neoproterozoic Era is argued to have been characterised by dramatic global climate change and an acceleration of biological evolution that was triggered by a remarkable reorganization of the continental plates. The reconfiguration of the continents related to the break-up of Rodinia around 0.8 Ga resulted in a sufficient redistribution of mass to cause a rapid True Polar Wander (TPW) phenomena - the entire crust-mantle system motion relative to the Earth's spin axis.

This project aims to recognise the palaeomagnetic record of one of the most complete Neoproterozoic sections on Earth that crop-out in Eastern Svalbard. The palaeomagnetic Neoproterozoic record will be examined in several time windows. This should potentially allow us to determine the acceleration of velocity stages for East Svalbard, track its rotations, verify the postulated Neoproterozoic TPW events and significantly improve actual models of Rodinia evolution. Using the primary palaeomagnetic components we expect to quantify, for the first time, the spatial relations to adjacent lithospheric units of Laurentia as well as to Baltica and alleged Arctida in the Neoproterozoic.

The NEOMAGRATE creates multidisciplinary international platform bringing together experienced Arctic scientists from different branches of the Earth Sciences. Palaeomagnetic and rock-magnetic investigations will be conducted at the project host Institute of Geophysics Polish Academy of Sciences. Laboratories of the Faculty of Geology, University of Warsaw will be responsible for the petrological and mineralogical investigations. Chemo-stratigraphic, isotopic age determination and structural control of the sampling sites will be coordinated by the scientists from Dartmouth College (United States), Uppsala University (Sweden) and the Natural History Museum of London (Great Britain).

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Other information:

The work will be carried out under supervision of:
Dr hab. Krzysztof Michalski (assoc. prof.) Institute of Geophysics Polish Academy of Sciences, e-mail: krzysztof.michalski@igf.edu.pl,

The amount of the scholarship: 5000 PLN gross with the employer's costs for the 36 months of the doctoral project, financed by the National Science Center for the project implementation; in the remaining months of education at the doctoral school, a doctoral student without a doctoral degree receives a doctoral scholarship in accordance with Art. 209 of the Act of July 20, 2018 Law on Higher Education and Science.

Requirements to admission:

Recruitment will be conducted in accordance with the requirements of the Regulations on awarding NCN scholarships in research projects financed by the National Science Center, introduced by the resolution of the Council of the National Science Center No. 25/2019 of 14 March 2019, and in accordance with the rules applicable in this entity. The recruitment committee shall evaluate the candidates' research achievements, their research-related achievements, and competencies as regards specific tasks in the research project, expressed as a point score:

the candidate's research achievements, including publications in prestigious academic press/journals (50% of the final score):

- 4 points – outstanding;
- 3 points – very good;
- 2 points – good;
- 1 points – poor;
- 0 points – no scientific achievements.

research-related achievements, scholarships, awards and research experience gained in Poland or abroad, research workshops and training courses, participation in research projects(20% of the final score):

- 4 points – outstanding (e.g. scholarships, fellowships at leading foreign research centres, prestigious international prizes or awards, workshops or training courses at the leading research centres, participation in international or foreign projects);

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- 3 points – significant (scholarships, fellowships at good Polish and foreign research centres, national prizes or awards, domestic or foreign workshops or training courses, participation in Polish or foreign projects);
- 2 points – moderate (local prizes or awards, workshops or training courses, participation in university projects);
- 1 point – poor achievements;
- 0 points – no achievements.

the candidate's competence to carry out specific tasks in the research project(30% of the final score):

- 3 points – very good;
- 2 points – good;
- 1 point – poor;
- 0 points – no competence.

During the evaluation of the candidate's scientific achievements, as well as achievements resulting from conducting scientific research, scholarships, awards and scientific experience gained in the country or abroad, workshops and scientific training, participation in research projects, only those achievements and activities of the candidate will be taken into account, which contributed to the improvement of competences to fulfill the tasks in the NEOMAGRATE research project, or confirm such competences.

https://ncn.gov.pl/dioscuri/dioscuri3/ncn_scholarships_regulations_25_2019.pdf

Conditions for admission to the qualification procedure

1. registering an account in the www.irk.us.edu.pl system and filling in a form containing

appropriate declarations and consents;

2. submission in the system www.irk.us.edu.pl:

– a copy of the graduation diploma with a supplement;

– curriculum vitae;

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– outline of a doctoral project, the form of scientific achievements and the documents certifying them, as well as other documents specified in the eligibility criteria (admissible submission at the office of the IEDS, via polarknow@us.edu.pl, mail, or the IEDS website.

3. paying the enrolment fee in the amount of PLN 190.

Information on the conditions for awarding a scholarship:

The scholarship is financed by NCN under the NCN OPUS funding schemes and consists of a doctoral scholarship within the meaning of Article 209 of the Law on Higher Education and Science of July 20, 2018 and the NCN scholarship for doctoral students as defined in Annex 2 to the Regulations on awarding funding for the research tasks founded by the National Science Centre as regards research projects, set forth in NCN Council Resolution No. 95/2020 of September 14, 2020. The competition may be entered by a person who does not have a doctoral degree and is not a doctoral school participant.