



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

ul. Bedzińska 60  
41-200 Sosnowiec  
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**Title of PhD project:** Pre-Caledonien palaeogeography of Svalbard based on palaeomagnetic investigations of Neoproterozoic rocks of eastern Spitsbergen 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 palaeomagnetism 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 palaeomagnetic experiments at IG PAS.
3. Conducting rock-magnetic investigations at IG PAS.
4. Processing the results of palaeomagnetic and rock-magnetic experiments.
5. Taking a part in petrological and mineralogical analyses at Faculty of Geology University of Warsaw.
6. Interpretation of interdisciplinary rock-magnetic –petrological-mineralogical investigations results.
7. Preparing publications.



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**Abstract:**

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 Arctica in the Neoproterozoic.

**Other information:**

The work will be carried out under supervision of:

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