



Geological Workshop Geology of Svalbard Basement

4-9 September, 2024, Svalbard

SVALGEOBASE II: TECTONO-THERMAL EVOLUTION OF SVALBARD – FROM METAMORPHIC AND MAGMATIC PROCESSES TO GEOTHERMAL ENERGY

Plan of scientific sessions:

Opening session (3 September 2024, 16:00- 18:00 – 2 hours)

We will provide an introduction to the geology of Svalbard and the Svalbard Integrated Arctic Earth Observing System (SIOS). We will also provide comprehensive safety instructions, ensuring your well-being throughout the conference.

Session I (4 September 2024, 16:00-19:00 – 3 hours)

Oral presentations - part 1

Session II (6 September 2024, 9:00 – 12:00 – 3 hours)

Oral presentations - part 2

Session III (7 September 2024, 15:00 – 18:00 – 3 hours)

Oral presentations - part 3

Session IV (8 September 2024, 15:00 – 18:00 – 3 hours)

Oral presentations - part 4, summary and recommendations from the workshop

The time frame of the scientific sessions can be subjected to changes due to weather and sea conditions.

Poster room

There will be no separate scientific poster session. However, you are welcome to present posters and other promotional materials (banners, brochures, publications) promoting particular institutions involved in SvalGeoBase II or posters related to your ongoing projects. Posters will be exhibited on 2 September 2024 (9:00 – 15:00) on the upper deck of MS Horizont II (dining room) during our stay in Ny Alesund.

SvalGeoBase II will be concentrated on three distinct thematic packages:

- A. The jigsaw puzzle of tectonic-thermal provinces of Svalbard – spatial relations, paleogeographic positions, geotectonic context.
- B. From magmatic processes to climate change.
- C. At the edge of the continental platform – geothermal potential of Svalbard.

Preferred topics of presentations.

- Introductions to new projects related to the tectono-thermal evolution of Svalbard.
- Assessment of geochronological data from the main tectonic provinces of Svalbard.
- Tectono-thermal aspects of the Ellesmerian and Eurekan deformation events.
- Recent paleomagnetic database of Svalbard. Quantification of Svalbard's paleogeographic position in Proterozoic and Phanerozoic. Supercontinent cycles, paleomagnetism of the Large Igneous Provinces (LIPs) and other magmatic complexes. Ferromagnetic mineralogy in the context of primary paleomagnetic signals and secondary overprints.
- Mesozoic High Arctic Large Igneous Province (HALIP) and thermal alterations of the sediments adjacent to magmatic intrusions. Associated processes – hydrocarbon generation and migration, icehouse effect, emission of greenhouse gasses and volatile substances into the atmosphere. Volatiles cycling during emplacement of HALIP.
- The geothermal potential of Svalbard in the context of recent geotectonic events, such as the geothermal gradient, uplift processes, and spatial heterogeneity in the thermal conductivity of Svalbard's rocks.
- Svalbard's geotectonic place in a pan-Arctic setting, including its recent geotectonic setting, paleogeographic position relative to Baltica and Laurentia, and location within the Rodinia supercontinent.
- Natural resources of the northern sector of the Atlantic Ocean. Policies, opportunities, environmental concerns, societal acceptance.
- Arctic logistics strategies and Arctic logistics systems of the institutions involved in SvalGeoBase II.
- New field and laboratory analytical techniques (especially isotopic dating of challenging rocks like e.g. tillites), new approaches to tectono-thermal models.

Please note that the above list is not exhaustive of the topics that can be covered in the SvalGeoBase II lectures. You are welcome to present the results of your field observations and laboratory experiments and promote your projects even if they are not directly related to the main thematic lines of SvalGeoBase II.

Oral sessions - instructions for the authors

Authors will have approximately 20 minutes for their presentations plus 10 minutes for discussion. Presentations in electronic form (pen drive) should be delivered before the beginning of the session. Rest assured, the organisers will provide a notebook and digital projector for your convenience.

Poster room

There are no defined size limitations for the posters/banners' dimensions. Preferred are freestanding displays; poster boards are not available on board).

Abstracts.

Extended abstracts of oral presentations will be reviewed and published in the **PUBLICATIONS OF THE INSTITUTE OF GEOPHYSICS POLISH ACADEMY OF SCIENCES.**

We kindly ask you to prepare **one presentation/person.**

Please contact the coordinators of SvalGeoBase II **by 15th August 2024** at the latest **to define the title of your presentation.**

The preliminary deadline for submission of abstracts is 30th September 2024 (after revision of the abstracts, authors will have the opportunity to make **final corrections up to 30th November 2024**)

Abstracts should be limited to 4 pages (A4 format), including text, references and figures.

Please send an electronic version of the abstract (DOC or PDF format) simultaneously to the following e-mails:

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svalgeobase@iqf.edu.pl

Language

The language of *Publs.Inst.Geoph.PAS* is English. Before submitting the paper, please make sure that the language is correct. Our language editor can polish syntax and spelling. In exceptional cases, some issues may be published in Polish.

Required organization of the extended abstract

- Title.
- Name, affiliation, exact postal and e-mail addresses of the authors, and the indication of who the corresponding author is.
- Keywords (up to 5).
- Text (optionally divided into numbered sections).
- List of references.

References

"Reference list" should be arranged in alphabetical order, according to the following pattern:

In the case of an article in a journal:

Teisseyre, R., and M. Górski (2007), Physics of basic motions in the asymmetric continuum, *Acta Geophys.* 55, 119-----132, DOI: 102478/s11600-006-0008-4.

In the case of a book:

Lilensten, J., and J. Bornarel (2006), *Space Weather, Environment and Societies*, Springer Verlag, Dordrecht, DOI: 10.1007/1-4020-4332-5.

In the case of a chapter in a book:

Moriya, T., and R. Teisseyre (2006), Design of rotational seismometer and non-linear behaviour of rotation components of earthquakes. In: R. Teisseyre, M. Takeo, and E. Majewski (eds.), *Earthquake Source Asymmetry, Structural Media and Rotation Effect*, Springer, Berlin, 439-----450.

In the case of an article in proceedings:

Nikolaevskiy, V.N. (1998), Tectonic stress migration as nonlinear wave process along earth crust faults. In: T. Adachi, F. Oka, and A. Yashima (eds.), *Proc. 4th Int. Workshop on Localization and Bifurcation Theory for Soils and Rocks*, Gifu, Japan, 28 Sept. ----- 2 Oct. 1997, A.A. Balkema, Rotterdam, 137-142.

If the quoted article or book has a DOI number, the author should include it in the references. The author is responsible for the accuracy and completeness of the references.

"References" in the text should consist of the name followed by the year of publication in parentheses (if more than two authors, please give the first author's name followed by "et al." and year). All references cited in the text must be included in the reference list, and vice versa.

Figures

Figures must be submitted in an electronic file, preferably saved as jpg, tiff or cdr. We cannot accept figures created in Microsoft Word, WordPerfect, or Excel as they are low-resolution graphics and unsuitable for reproduction. The resolution for graphic files must be 250–300 dpi for colour and greyscale images and 600–900 dpi for black and white only. Line weights and lettering should be suitable for reduction. Please consult the recent issue of our journal as to the size of the figures.

Tables should be created with Word's Insert Table function. Avoid tables built with tab keys or as pictures. Tables should be numbered consecutively with Arabic numerals and referred to in the text. The header should be placed on top of the table. Please ensure that the tables' size is adequate to the layout of the journal's page (16 × 24.7 cm).

More instructions for the authors:

<https://pub.igf.edu.pl/for-authors,7,en.html>