

Permafrost Young Researchers Workshop 2014



**17 - 18 June 2014, Evora, Portugal
Report**

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PYRW 2014 – Workshop Report

1. Introduction	2
1.1. Goals and Purpose	2
1.2. Preparations	2
2. Participants	3
3. Content - Schedule	4
3.1. Plenary speakers	4
3.2. Breakout Sessions	5
3.3. ICARP III activity - the World Café	7
3.4. Social Event	7
4. Supporting organizations and sponsors	7
5. Feedback from participants	8
6. Photographies	11



1. Introduction

1.1. Goals and Purpose

The Permafrost Young Researchers Workshop 2014 (www.eucop4.org/permafrost-young-researchers-workshop.html) was held on the 18th of June in conjunction with the Fourth European Conference on Permafrost 2014 in Evora, Portugal (www.eucop4.org). This workshop included approximately 100 early career permafrost scientists and engineers and aimed to build interdisciplinary knowledge on how the Arctic and Antarctic permafrost regions play a key role in the Earth System. One major goal was to give each participant an overarching view of permafrost-related topics beyond disciplinary research questions. To achieve this, the participants shared their knowledge in thematic break-out sessions and elaborated on the future avenues of permafrost research. They were also inspired and guided by mentors who play a key role in permafrost research either in large-scale international projects or science policy.

1.2. Preparations

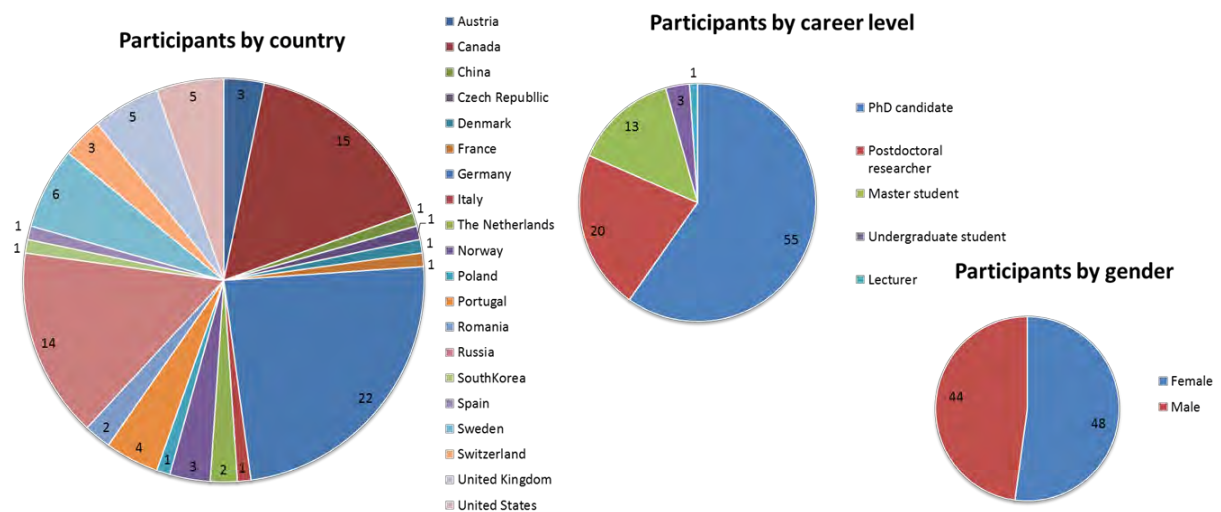
The organizing committee consisted of 13 young permafrost scientists from 6 different countries: Michael Fritz (PYRN, Germany), Alexander Nieuwendam (PYRN, Portugal), Anne Morgenstern (PYRN, Germany), Marc Oliva (PYRN, Portugal), Elin Högström (PAGE21, Austria), Matthias Siewert (PAGE21, Sweden), Stefanie Weege (PAGE21, Germany), Alison Cassidy (ADAPT, Canada), Bethany Deshpande (ADAPT, Canada), Michel Paquette (ADAPT, Canada), Ashley Rudy (ADAPT, Canada), Frédéric Bouchard (ADAPT, Canada), Julie Lepage (ADAPT, Canada), and Ylva Sjöberg (APECS, Sweden).

In September 2013, an initial meeting was held to plan and prepare the Young Researchers Workshop in Abisko, Northern Sweden. The timeframe and decision making procedure were discussed, as was the funding and the expected expenses and participants. The content of the workshop was roughly assessed, and feedback from previously held early-career workshops for permafrost scientists was used as input. Sub-committees were established to divide the responsibilities for the work that was to be done. From September 2013 until the workshop in Evora 2014, monthly progress meetings were thereafter held via skype within the EUCOP workshop organizing committee or/and the subcommittees.



2. Participants

Due to logistical and budget constraints participation was limited. The organizers received 132 applications for 92 spots that were selected through a peer-reviewed process. Participating early career researchers came from 20 different countries. Women and men comprised 52% and 48%, respectively. The educational level was diverse with 55 PhD candidates, 20 postdoctoral researchers, 13 master students, 3 undergraduate students, and 1 lecturer.





3. Content - Schedule

17.06.2014	19h00	Registration opens Welcome from the organization team. Dinner, Icebreaker
18.06.2014	9h00 - 10h00	Introduction and keynote I
	10h00 - 10h20	Coffee
	10h20 - 11h20	Data management - from collecting to sharing
	Breakout sessions I	Editor session Modelling exercise for beginners Open session 1 Method challenges
	11h30 - 12h30	Data management - from collecting to sharing
	Breakout sessions II	Editor session Modelling discussion Open session 2 Social, administrative, gender family
	12h30 - 14h00	Lunch
	14h00 - 14h30	Keynote II
	14h30 - 16h00	International session
	Breakout session III	Politics, northern communities and outreach Designing a research project Graphic design for science
	16h00 - 17h30	World café
	17h30 - 17h45	Closing remarks

3.1. Plenary speakers

In total 17 mentors and senior guest scientists were invited to the workshop (see also 3.2. Breakout Sessions). Three keynote speakers with broad perspective on permafrost related science and policy were invited: **Antoni Lewkowicz**, current President of the International Permafrost Association (IPA), Professor and Dean of the Faculty of Arts at the University of Ottawa, Canada; **Volker Rachold**, Executive Secretary of the International Arctic Science Committee (IASC); **Margareta Johansson**,



Executive Secretary of the International Network for Research and Monitoring in the Arctic (INTERACT) and executive committee member of Changing Permafrost in the Arctic and its Global Effects in the 21st century (PAGE21).

3.2. Breakout Sessions

Data management - from collecting to sharing: The guests were Jean-Pierre Lanckmann from the Arctic Portal and Boris Biskaborn from the Alfred-Wegener Institute (AWI), who are respectively developing the PAGE21 database and managing the Global Terrestrial Network for Permafrost (GTNP) database. Existing databases and their current challenges were presented and discussed, as well as the collecting, archiving and sharing of data, including the necessity of data compatibility and the potential of international standards.

Editor session: The guest was Stefan Gruber, a specialist in mountain permafrost and the editor in chief of the peer-reviewed ISI journal *The Cryosphere*. With the purpose of learning how to write and publish a successful scientific paper, the participants were introduced to the reviewing process and insight into how editors and reviewers think and prioritize. Stefan Gruber shared advice about structuring a good paper and how to find a suitable journal.

Modelling exercise for beginners: The guest was Moritz Langer, scientific coordinator for AWI at the Samoylov research station. His talk consisted of an introduction to permafrost modelling and application, including a practical exercise for non-modellers.

Modelling discussion session: The guest was Altug Ekici from Stockholm University Dpt. of Applied Environmental Science (ITM). Current modelling research and challenges were discussed, with the aim to support the group in problem-solving issues or roadblocks.

Open session 1: Method challenges: This session created an open discussion about research related challenges, including an introduction on method related issues, and on sources that are commonly used when problems arise. Typical problems were identified and discussed together in smaller groups.

Open session 2: Social, administrative, gender family. The guest was Leena-Kaisa Viitanen, PAGE21 project manager at AWI. Leena recently moved with her family from Iceland where she



worked for Arctic Portal, to Germany. This open session brought up topics related to social, administrative and gender/family related challenges in a researchers everyday life.

International session. The guest was Warwick F. Vincent, Professor at Laval University, as well as the Scientific Coordinator for ADAPT and for the Center for Northern Studies (CEN). This session provided an overview of current international collaborations in permafrost research and put forward discussions among young researchers about the existing networks and opportunities for collaborations.

Politics, northern communities and outreach. The guests were Gerlis Fugmann, from the International Centre for Northern Governance and Development, University of Saskatchewan, Canada and previous APECS Executive Committee member, Inga May from AWI and Kenji Yoshikawa, Professor at the Water and Environmental Research Center, Inst. of Northern Engineering, University of Alaska. Since Northern communities are strongly affected by thawing permafrost, this session brought up the related social, political and economic issues and the possibilities to bring together front line decision makers, permafrost experts and the northern communities for the purpose of empowerment and adaptation.

Designing a research project. The guests: Bo Elberling, Professor at Department of Geosciences and Natural Resources, University of Copenhagen and Scott Lamoureux, Associate Professor at the Department of Geography, Queen's University. This session provided an opportunity for the participants to organize their thoughts for writing an application for their own research project, with hands-on exercises and tips on how to find your inspirational mode and to formulate your research goals.

Graphics design for science. The guest was Bruno Boto - graphic designer, visual communication consultant and trainer in areas of design. This session introduced some concepts, tips and practical techniques for scientists to improve the visual communication and presentation of their research, whether performed by digital or printed media. It provided a basic understanding of the basic notions and importance of graphic composition, its rules along with and tools and mechanisms in order to capture and transmit content more efficiently to a variety of audiences.



3.3. ICARP III activity - the World Café

One major focus of the workshop was to elaborate on the **future avenues of permafrost research from a young researchers' perspective**. This activity was mentored by IASC who is leading the process towards the **3rd International Conference on Arctic Research Planning (ICARP III)** and the IPA which is leading the permafrost-related issues within ICARP III. Several members of IASC working groups (Cryosphere and Terrestrial) acted as mentors in this effort. The outcome will be a young researcher contribution to IASC directly and towards the IPA strategy for ICARP III issued as a “Permafrost Priority Sheet” summarizing the discussions from the forum. This Priority Sheet will be a short document, which will contribute to an assessment of research priorities from an early career researcher perspective. It will feed into the final ICARP III meeting in Toyama, Japan in April 2015, together with contributions from other initiatives (e.g. APECS and Arctic in Rapid Transition). An online questionnaire was set up prior to the workshop and was made available to all PYRN and APECS members (ca. 5,000) including the young researchers from PAGE21 and ADAPT. All answers were compiled and grouped according to research topics that had been distributed before the on-site activity, which was conducted in the format of a World Café. More than a dozen small moving groups worked on the predefined research questions in an iterative process of discussing, reformulating and narrowing of those questions. In the end, a voting system with a predefined hierarchy allowed all participants to synthesize the most important issues of permafrost research in the future.

3.4. Social Event

On the evening of the 17th, the workshop icebreaker took place in the Hotel Dom Fernando. Dinner was served and welcome speeches were held by the organizing committee. After the dinner, the EUCOP4 local organizers offered a continuous evening event with snacks and beverages in the town center, where workshop participants as well as IPA Council joined up.



4. Supporting organizations and sponsors

Workshop support was provided on all levels including travel grants, catering, accommodation, promotion, website administration, and mentorship. In kind support for rooms and technical logistics was granted by the conference organizers and the University of Evora. Tremendous financial support was provided by the International Permafrost Association (IPA), the International Arctic Science Committee (IASC), Climate and Cryosphere (CliC) Project, the Bolin Centre for Climate Research, PAGE21 and ADAPT. The workshop organizers are highly indebted to all above mentioned organisations as well as to all mentors, guests and speakers who helped frame the workshop content. All the workshop participants receiving funding were asked to create a FrostByte - a short video to present their research. The production of the approximately 90 FrostBytes was strongly supported by the Climate and Cryosphere project (CliC), which also hosts the FrostBytes on its website (<http://www.climate-cryosphere.org/categories/138-frostbytes>).

The organizers acknowledge the generous financial support by

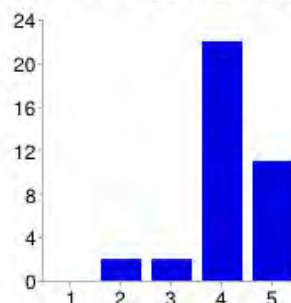


5. Feedback from participants

After the workshop, an evaluation form was prepared by the organizers and sent out to the participants to collect feedback. The outcome of this evaluation has been shared among the organizers and made available to use for future Workshops relevant for early career scientists. Similar feedback from a previous workshop (PAGE21 YR workshop 2013, Abisko) was already very helpful for the preparation of the PYRW 2014. The evaluation form included grading of the PYRW in general as well as the specific breakout sessions and keynote speakers. Furthermore, it allowed to express specific opinions and criticism on the workshop, as well as wishes for future events. The outcome is partly presented here below (grading from 1 - 5 = negative to positive).

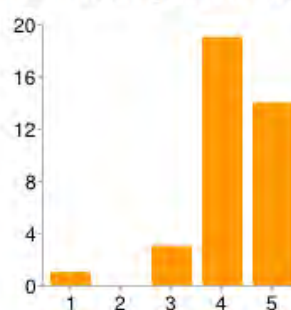


How would you rate the workshop overall?



1	0	0%
2	2	5%
3	2	5%
4	22	58%
5	11	29%

How would you rate the organization of the Workshop overall?

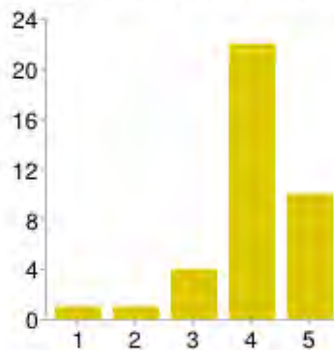


1	1	3%
2	0	0%
3	3	8%
4	19	50%
5	14	37%

How would you rate the intensity of the workshop?



I felt seriously under-challenged	2	5%
boring at times	6	16%
perfect!	24	63%
mildly stressful	6	16%
felt like a boot camp	0	0%

**Did you like the workshop program?**

1	1	3%
2	1	3%
3	4	11%
4	22	58%
5	10	26%

How did you like the keynotes?

1	0	0%
2	1	3%
3	8	21%
4	16	42%
5	13	34%

What kind of Breakout Sessions would you like to have at a future workshop of this kind?

- 1) A primer in oral presentations. 2) A compendium of cold climate research resources. 3) What to do when confronted with politics and ethics in research and publishing.
- As there were quite some presentations at the conference which could be improved (though not only by young scientists!), a workshop on how to make good presentations would be very helpful. This could also include another workshop on how to design a poster. In general, the breakout sessions could be a bit longer, sometimes I felt there was not enough time for necessary discussions.
- GIS and remote sensing, changes in the polar regions, interaction of the permafrost and biosphere, astrobiology
- Career planning not limited to academics.
- Perhaps sessions on oral presentation skills, or how to effectively talk someone through your poster presentation



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- More about tools for giving presentations, speeches, presenting research, getting new projects, selling ideas
 - i liked the ones on offer, i liked the ones i went to. i would have liked to attend ones i didn't get to go to. i would like to see something that addresses working in multidisciplinary research groups.
 - About new techniques (geophysical, remote sensing).
 - In general good to discuss tools - so good choice this year
 - writing and reviewing tips
 - breakout sessions was good
 - continuing the discussion about family and working in science - more to the topic "writing" (paper, proposal) and creating a project (including financial aspects - how to plan these things)
 - Thermokarst session
 - Group management in scientific work Scientific software (open source) and methods in data analysis (GIS, modelling, statistics, numerical computation)

What kind of other activities would you like to have at a future workshop of this kind?

- Short demo field camp (if location is suitable) where to take measurements/samples and prepare samples for analysis.
- I wish I had more time to spend with others in a small group to discuss my specific interest (paleoclimate reconstruction) in an open fashion.
- -include any type of sports
- same activity without world cafe :)
- Talking with outstanding permafrost researchers and engineer about their permafrost expeditions and projects in 1970-80 to compare conditions and possibilities of their time and our (PYRs) nowadays.
- More soft skills sessions
- Intellectual team games
- More practical activities like modelling session, drilling seminar etc.
- A real drilling workshop!
- field lectures, some interesting social communication as World Cafe.



6. Photographies



Participants, organizers and mentors of the Permafrost Young Researchers Workshop 2014 in Evora, Portugal.



The workshop organizing committee: (upper row) Matthias Siewert, Ylva Sjöberg, Frédéric Bouchard, Alexandre Nieuwendam, Michael Fritz, Michel Paquette, (lower row) Elin Högström, Julie Lepage, Anne Morgenstern, Bethany Deshpande, Ashley Rudy, Marc Oliva, (front) Stefanie Weege.



The official ICARP III activity during the workshop organized in form of a World Café.