

Newsletter Summer 2023

Meet the New ExCom!

Emma Lathrop (President)



Emma is a PhD candidate at Northern Arizona University. Her research is focused on quantifying the magnitude and mechanisms of soil carbon loss in permafrost ecosystems following warming. A changing arctic impacts everyone and she strives to improve how science is communicated to inform policy makers and the public. Emma is committed to promoting a culture of inclusion in the field and lab.

Natalie Arpin (Vice President)



Natalie is a 3rd year PhD student in Civil Engineering at Queen's University in Kingston, Canada. She focuses on the impact of changing permafrost conditions on linear infrastructure. She conducts her research on the Hudson Bay Railway in Manitoba, Canada, where she monitors the effects and distribution of frost jacking on railway bridges.

Kaytan Kelkar (Secretary)



Kaytan is a second year Ph.D. student at the University of Alaska Fairbanks. His research interest is in periglacial geomorphology focusing on permafrost thaw driven slope instability in the Alaska Range. Kaytan's Ph.D. dissertation will comprise investigating rock glacier dynamics, periglacial landslide hazard assessment, and mountain permafrost modeling. His long-term goal is to improve hazard mitigation in permafrost-affected mountain terrain

Lin Chen (Treasurer)



Dr. Lin Chen is a postdoctoral researcher at the University of California, Riverside, USA. Lin completed his Ph.D. at the University of Montreal, Canada, where he utilized a combination of field observation and numerical modeling to investigate the impacts of subsurface water flow on the thermal stability of roads and highways. His current research interests include permafrost modeling, surface water-groundwater interactions, solute transport, surface energy balance, cold-region infrastructure, and computationally efficient algorithms.

Denis Frolov (Webmaster)



Denis Frolov is a research fellow at Faculty of Geography, Lomonosov Moscow State University. His research interests include snow cover and climatic spatial and time alterations as well as regularities of snow cover formation and the processes of heat and mass transport in snow cover and on the boundary with ground while ground freezing. Participated in expeditions to Caucasus, New Siberian islands and other parts of Russian Arctic.

Saskia Eppinger
(Newsletter Coordinator)



Saskia is a PhD-Student at the Technical University of Munich (Germany). Her research interest is arctic as well as alpine permafrost. She is currently working in different arctic environments in Canada and Greenland, her focus is thermokarst, especially retrogressive thaw slumps. Saskia uses geophysical methods in the field as well as complementary lab work. And she just loves the special light conditions during field work in the arctic summer.

Alejandro Alvarez, ICOP coordinator

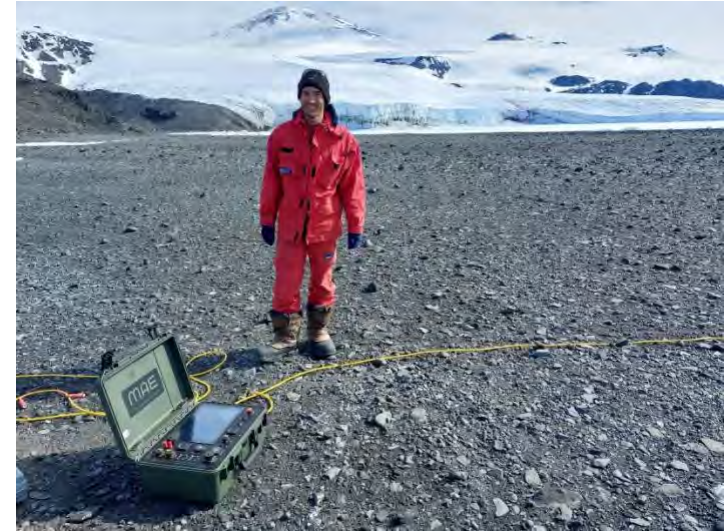
Alejandro Alvarez is a Ph.D. student in the Department of Earth and Atmospheric Sciences at the University of Alberta, Canada. His Ph.D. research focuses on mapping and understanding the distribution of ice-rich permafrost within the Mackenzie Delta Region, NT, Canada. His Ph.D. research will also investigate ground ice bodies typically found within the region, including buried glacier ice, segregated ice, intrusive ice and wedge ice. Alejandro has had the privilege of assisting and leading permafrost fieldwork for six years in many northern communities of Yukon and Northwest Territories. Alejandro joined PYRN in 2023.

Joe Young (ICOP Coordinator)

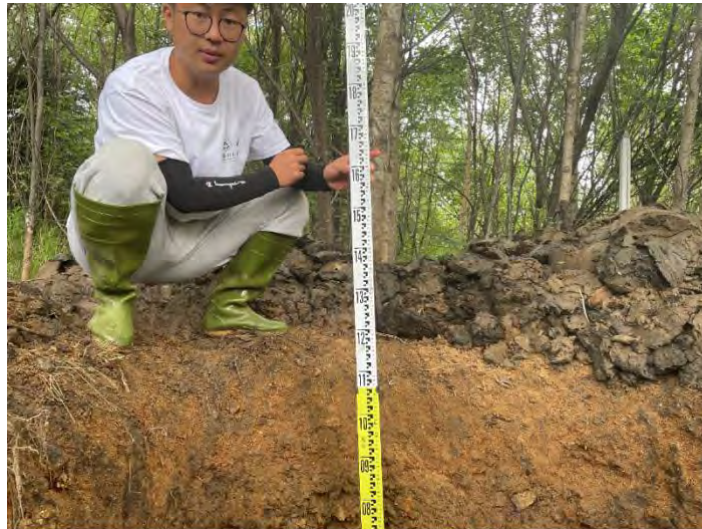


Joseph is a PhD student at the University of Alberta where he is carrying out research on recent permafrost landslides in the Mackenzie Valley, Northwest Territories. His primary role in PYRN is coordinating early career activities and workshops for the ICOP 2024 conference in Whitehorse, Yukon.

Stefano Ponti (ICOP Coordinator)



Stefano is a researcher at University of Insubria (Varese, Italy). His research focuses on the use of remote sensing techniques to mitigate the effects of climate change in urban and polar regions. During his expeditions to the Arctic, Antarctic and alpine area, he is developing new methods to detect permafrost, active layer thickness and periglacial processes through the use of UAVs and thermography.



Zhai Jinbang ICOP Coordinator

Zhai Jinbang studies permafrost since China is a permafrost country. The permafrost is mainly distributed in the Qinghai-Tibet Plateau and the northeastern region. Harbin, the city where he studies, is located in the northeastern part of China, where there is permafrost. The presence of permafrost causes many engineering problems. At the graduate level, his research area was water migration and soil frost heaving. During his PhD studies, Zhai Jinbang's main research interest was in permafrost engineering, where he studied the effects of permafrost thawing and settlement on engineering by means of on-site monitoring surveys and indoor experiments.

Soumitra Sakhalkar
(Newsletter Coordinator)



Soumitra Sakhalkar is a PhD student at the University of Alaska Fairbanks, whose study involves investigating the terrain instability caused by the permafrost degradation on the North Slope of Alaska, using both geophysical measurements and InSAR data. His long-term goal is to communicate the research to the wider public and incorporate the traditional knowledge of the lands he studies, understanding how the permafrost landscape change impacts human, plant as well as animal life.

Bastien Charonnat
(ICOP Coordinator)



Bastien Charonnat is a PhD candidate at École de technologie supérieure (ÉTS), Université du Québec, Montreal (Canada). His research focuses on the hydrological behavior of proglacial systems and interactions between cryospheric features in glacial valleys. He uses a multimethod approach at his field site, in the St. Elias Mts (Yukon, Canada). He also participated in field expeditions on rock glaciers in the French Alps during his Master's.

Xianglong Li
(Nat'l Representative Coordinator)



Xianglong completed his Master's degree in June 2021 from Lanzhou Jiaotong University (Lanzhou, China). His studies during the Master's degree allowed him to develop an interest in the study of the cryosphere, with a particular focus on the effects of climate change on humans and on engineering architecture. In September 2021, he got his PhD acceptance letter from Northeast Forestry University (Harbin, China), and his research is now focused on urban engineering problems in the cryosphere under climate warming, such as surface subsidence, particular expertise in the application of remote sensing in the engineering field.

Dr. Remya S.N.
(ICOP Coordinator)



Dr. Remya S N is an Assistant Professor at the School for Sustainable Development in Amrita Viswa Vidyapeetham, Kerala, India. Earlier she was working as a Scientist in the Indian Institute of Science Bangalore, India. She is a remote sensing and glaciology expert with a passion for studying the Himalayan cryosphere. She has extensive experience in working with optical satellite data, with experience in the oldest CORONA (1960's) to the latest data sets such as Sentinel, Cartosat, and Landsat. She applies her skills to study glacier dynamics and Glacial Lake Outburst Flood (GLOF) risks. Additionally, Dr. Remya is one of the team members who has developed a unique technique to identify glacial lakes and their future extent, which has been implemented in various parts of the Himalayas. She has participated in several glacier expeditions in both the Himalayas and Iceland. Recently, her focus has shifted to studying permafrost and its impact on High Mountain Asia using satellite imagery and field investigations. She has also visited some of the rock glaciers in the Pri-Panchal ranges of the Himalayan region.

PYRN Meetings

6th European Conference on Permafrost (EuCOP) 2023, Puigcerda, Spain

By Saskia Eppinger



PYRN workshop attendees outside the Casino Cereta in Puigcerda.

The **PYRN workshop** prior to the **6th European Conference on Permafrost (EUCOP 2023)** in Puigcerdà (Spain) was a success! With a combination of seminars and get-togethers it was the perfect start into a great week to meet and network with all Early Career Researchers (ERCs) attending the conference. We want to thank all our speakers for their insights into very personal field experiences, their results and some insights on how to transition from ERC to a professorship. A big extra “thank you” to Adam for stepping up last minute for a canceled talk! And as the perfect “ice breaker” we had a nice party that evening at the Nordic Lounge and Bar, including a lot of Spanish food and dancing. We congratulate our Outstanding PYRN Award winners Natalie Arpin (Oral Presentation) and Pia Petzold (Poster Presentation). We sincerely thank Dr. Marc Oliva and the organizing committee for making this conference a memorable experience.

And of course a big thanks to our sponsors, the International Permafrost Association, [Nunataryuk](#), **International Association of Geomorphologists**, **and the Swiss Polar Institute** as well as to all of you for making it such a great day!



Dr. Hugues Lantuit, head of the Arctic Coastal Research Group at the Alfred Wegener Institute gave an insightful talk during the PYRN workshop.



PYRN Best Student Presentation award winners: Natalie Arpin (center) and Pia Petzold (right) were presented their awards by former PYRN Ex Com member Adam Kirkwood (left). **Congratulations once again Natalie and Pia!!**

PYRN Activities and Highlights

PYRN Italy

By Stefano Ponti

The Italian PYRN members are currently doing fieldwork on the Italian Alps and at Toolik Field Station (Alaska). N. Colombo's research group is taking measurements on the Monte Rosa massif (Western Alps) at 2900 m a.s.l. to assess the impact of permafrost degradation on the water quality of high-elevation surface waters. He suggests a reading of this topic as one of the co-author (<https://doi.org/10.1016/j.scitotenv.2023.162777>). R.R. Colucci, instead, wants to highlight that a relict rock glacier could still contain residual ice, and this has impacts for the determination of the altitudinal permafrost limit in the Eastern Alps (<https://doi.org/10.1016/j.geomorph.2019.02.002>). S. Ponti wants to give attention to the diurnal frost creep process in Central Alps: through thermography and photogrammetry, the bending process and formation of needle ice is treated, leading to a redefinition of the potential frost creep formula (<https://doi.org/10.1002/esp.5639>). Together with professors and students, S. Ponti is also conducting photogrammetric surveys of permafrost features and permafrost modelling in the Alps (<https://geosciences-ir.it/>), while master and PhD students are doing fieldwork in Alaska to understand permafrost and greenhouse gases' flux relations (https://www.instagram.com/insubre_polar/).

Are you also PYRN National Representative for your country and want to feature your branch? Just let us know via contact@pyrn.org

Upcoming Events and Deadlines

1. **PYRN Seminar Series:** We will commence the seminar series once again this fall. Keep an eye out for an email detailing our first seminar speaker starting this September!
2. **American Geophysical Union Fall Meeting 2023:** AGU will be held in San Francisco, USA from December 11th-15th, abstract submission has closed and early bird registration is open until November 2nd, 2023. PYRN will organize an AGU social event for ECRs and others who may want to join are welcome! We will keep you informed! More details here: <https://www.agu.org/fall-meeting>
3. **International Conference on Permafrost 2024:** The 12th ICOP will be held in Whitehorse, Canada from June 16th – 20th, full paper submission deadline is August 31st, 2023. The deadline for extended abstract submissions is TBD. More details here: <https://event.fourwaves.com/999e4551-2c44-4e79-8ee8-98270952a41f/pages>
4. **European Geosciences Union 2024:** EGU will be held in Vienna, Austria from 14th-19th, 2024, abstract submission is open until 14th September, 2023. More details here: <https://www.egu24.eu/>
5. **International Conference on Cold Regions Engineering 2024:** The 20th ICCRE will be held in Anchorage, USA from May 13th – 16th, 2024. The draft of full paper submissions is due September 30th, 2023. More details here: <http://iccre2024.com/>
6. **Save-the-date:** 14th D-A-CH Permafrost Conference 10.-12.01.2024 in Germany, abstract submission: 31.10.2023, for more details register to the D-A-CH-permafrost union [newsletter](#); the conference will include a workshop by PYRN D-A-CH.

Cool Papers in a Warming World!

By Lin Chen

The following two permafrost papers caught our attention:

1. **Thermal observations in Arctic tundra show that low shrubs can actually cool the ground in winter by providing a thermal bridge through the snowpack.** Domine, F., K. Fourteau, G. Picard, G. Lackner, D. Sarrazin and M. Poirier (2022). Permafrost cooled in winter by thermal bridging through snow-covered shrub branches. Nature Geoscience 15(7): 554-560. <https://www.nature.com/articles/s41561-022-00979-2>
2. **Talik formation was observed across discontinuous permafrost In Alaska.** Farquharson, L. M., V. E. Romanovsky, A. Kholodov and D. Nicolsky (2022). Sub-aerial talik formation observed across the discontinuous permafrost zone of Alaska. Nature Geoscience 15: 475–481. <https://www.nature.com/articles/s41561-022-00952-z>

PYRN Social Media and Share your achievements

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We use social media to disseminate PYRN articles, information on events and conferences, and share pictures of our members' research activities!

Be part of the PYRN social media community and reach out to hundreds of permafrost enthusiasts! Use the tag **@pyrn_official** and hashtag **#pyrn** on Twitter, Facebook and Instagram on to share your updates or pictures via the 'PYRN' account.

Permafrost Young Researchers Network

The Permafrost Young Researchers Network (PYRN) is fostering innovative collaboration and seeking to promote future generations of permafrost researchers.

<http://pyrn.arcticportal.org>



This Newsletter was prepared by PYRN ExCom 2022-2024 team

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