

# Thawing Ground

A Newsletter of the US Permafrost Association



## What's Changed Since I Started Out

The mission of USPA is to advance permafrost science and engineering, support career development for students and early-career professionals and facilitate international collaborations.

This issue shares responses from many of our more senior members on the following question: *What are the biggest changes you've witnessed in permafrost science and engineering since you were early in your career?* Then, a survey question has them vote on this question: *What is the most pressing issue facing permafrost science and engineering today?* They can choose only one response from the following list: (A) leveraging AI, (B) international collaboration during geopolitical shifts, (C) interdisciplinary efforts, (D) diversity, (E) mentoring current ECRs, (F) keeping graduate education apace with technology changes. Enjoy!

### USPA Leaders

Jonathan O'Donnell, President

Emma Lathrop, President-elect

Wendy Presler, Treasurer  
[Wendy.presler@shanwil.com](mailto:Wendy.presler@shanwil.com)

Katherine Schexneider, Secretary  
[secretary@uspermafrost.org](mailto:secretary@uspermafrost.org)

Chris Burn is a Life Member of USPA, a past president of the IPA and is based in Canada. Here's what Chris has to say:

"The biggest change is, undoubtedly, that permafrost science is now a multidisciplinary activity. Technology has advanced, but much of the application of remote sensing and surveying capacity is directed to long-recognized aspects, like landscape change. However, back then there was barely any interest in biogeochemical aspects, like carbon fluxes and like mercury in water sources. We have moved from considering climate change having potential consequences for permafrost, as discussed at the 1983 Fairbanks ICOP, to studying what the consequences actually are."



Thank you, Chris!

John Thornley is the IPA Executive Committee national representative for the US and is based in Anchorage. Here's what John has to say:

"The observed warming shift at depth, even in cold permafrost, as shown by Dr. Romanovsky is a stark indicator that the design methods utilized earlier in my career are no longer realistic assumptions (e.g., -3degC adfreeze piles may not be adequately embedded to carry loads 50 years into the future)."



Thanks, John!

### Got Something to Share?

We'd love to showcase your work in *Thawing Ground*. Send the link to your article or a summary of a current project to [secretary@uspermafrost.org](mailto:secretary@uspermafrost.org). When others read it, you may find a new collaborator!

Hanli Wu is a USPA Life Member and based at the Harbin Institute of Technology in Harbin, China. Here's what Hanli has to say:

"The biggest changes I've witnessed are:  
\*Advanced remote sensing technology  
\*Stronger cross-disciplinary collaboration  
\*A critical, urgent focus on climate-driven thaw impact"



Thanks, Hanli!

### Billy Conner Wins Engineering Award

Earlier this year, Billy Connor, M.S.E.M., P.E., M.A.S.C.E. was presented with the Harold R. Peyton Award for Cold Regions Engineering. The award recognizes a career of outstanding contributions to engineering and spotlights the importance of work in this field. Here at USPA, we appreciate Billy's support as a Lifetime Member. Read the story [here](#). Enjoy the photo at right.



From left: David Prusak, David Sandberg, Billy Connor, Bill Schnabel at the award presentation.

Tom Douglas is a USPA past president and Life Member. He's based in Fairbanks at CRREL. Here's what Tom has to say:

"The USPA and the overall community has gotten far more diverse in terms of people, backgrounds, perspectives, and disciplines. The reasons to study permafrost seem to be always increasing and the increasingly varied teams and people doing it are also (thankfully) getting far more diverse."

Thanks, Tom!



Peter Griffith is a board member of USPA and works at NASA in suburban DC. Here's what Peter has to say:

"When I was an early career scientist, I was an ecologist studying biogeochemical cycles in coral reefs. My focus turned up north in 2009. The biggest changes I've seen are the availability of airborne radar and now NISAR for studying surface deformations in permafrost regions."



Thanks, Peter!



1.



2.

Howard Epstein is a USPA Life Member and professor at University of Virginia in Charlotte. Here's what Howie has to say:

"One of the biggest changes is the number of researchers working on permafrost science, since I began with Arctic research in the mid-to late 1990s. So many new scientists, particularly early career researchers, are working in this area, which was likely related to major Arctic research efforts by NSF, NASA, and DOE over the past few decades. One huge advance was the quantification of carbon stored in permafrost regions, and the potential for a historical carbon sink to transition to a source of CO<sub>2</sub> and CH<sub>4</sub>. Finally, advances in remote sensing and machine learning have allowed us to more accurately map permafrost features at broader extents and finer spatial scales."



Thank you, Howie!

What's the most pressing issue facing permafrost research today?

**Interdisciplinary efforts** received the most votes, followed by **mentoring early career researchers**. Others selected **leveraging AI** and **international collaboration**.

What do *you* think? Let us know at [secretary@uspermafrost.org](mailto:secretary@uspermafrost.org).

### Permafun Matching Quiz

On the left and right are four photographs of sites with permafrost. Match the photo to its site.

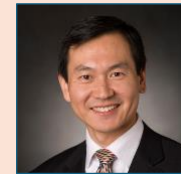
- A-- Batagai, Siberia
- B-- Toolik, AK
- C-- Tuktoyaktuk, NWT, CA
- D-- Longyearbyen, Svalbard

*How's your permafrost geography?*

Ming Xiao is a USPA Life Member, past president, and a professor at Penn State University. Here's what Ming has to say:

"Increased cross-disciplinary collaboration: people from diverse fields and sectors are working together to make sure the science advances are serving practical goals.

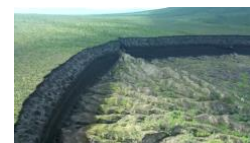
"Increased awareness and researchers outside of Alaska: I saw more people are studying permafrost science and engineering and the subject has gained significantly more awareness by the public"



Thank you, Ming!

## YouTube

USPA is now on YouTube! Check out our brand-new offering and subscribe to [The Permafrost Channel](#) Got some videos on permafrost? Let our secretary, Katherine, know. [secretary@uspermafrost.org](mailto:secretary@uspermafrost.org)



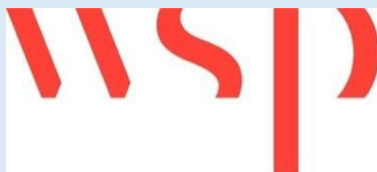
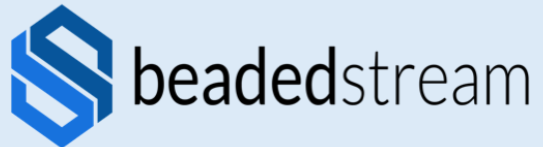
3.



4.

Answers: 1B, 2D, 3A, 4C

A Huge Thanks to Our Institutional Members!



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