

IACS promotes the advancement  
of cryospheric sciences of  
the Earth and solar system



IACS

International Association  
of Cryospheric Sciences

# IACS NEWSLETTER

May 2023

## Early-Career Researcher Award

IACS is pleased to announce the 2023 recipients of the IACS Early Career Scientist (ECS) Award: **Veronica Tollenaar** and **Yixi Zheng**. IACS received 23 nominations for this award.

**Veronica Tollenaar** from the Université libre de Bruxelles (ULB), Belgium, received the award for her paper:

**Tollenaar, V.**, Zekollari, H., Lhermitte, S., Tax, D., Debaille, V., Goderis, S., Claeys, P., Pattyn, F. (2022). Unexplored Antarctic meteorite collection sites revealed through machine learning, *Science Advances* 8, 8138, <https://doi.org/10.1126/sciadv.abj8138>

**Panel citation:** *The paper provides the first estimate of the probability of finding meteorites at any given location on the Antarctic ice sheet, and the number of meteorites yet to recover. The authors use a machine learning framework in which information on Antarctic meteorite finds is elegantly combined with a wealth of diverse data from remote sensing, observations and derived products. The framework allows to extract and quantify which factors (e.g., surface temperature, ice velocities, slope, etc.) are important for finding meteorites at blue ice areas. Results will help optimize future meteorite recovery missions.*

**Yixi Zheng** from the University of East Anglia, UK, received the award for her paper:

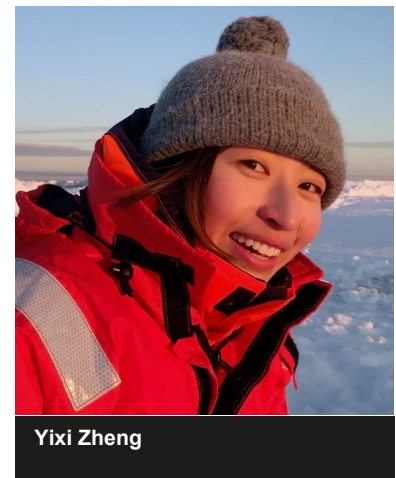
**Zheng, Y.**, Stevens, D. P., Heywood, K. J., Webber, B. G. M., and Queste, B. Y. (2022). Reversal of ocean gyres near ice shelves in the Amundsen Sea caused by the interaction of sea ice and wind, *The Cryosphere* 16, 3005–3019, <https://doi.org/10.5194/tc-16-3005-2022>

**Panel citation:** *Analyzing ship-based observations, the authors discover a hitherto unknown gyre close to the Thwaites Ice Shelf in Antarctica, which rotates in the opposite direction as an adjacent gyre close to Pine Island Glacier despite similar wind forcing. They then introduce a novel theory and use an elegant idealized numerical model to demonstrate that gyres adjacent to ice shelves can change strength and even direction depending on the angle between the sea ice edge and the wind conditions. The findings provide new insights into the complex interactions between atmosphere, sea-ice, ocean and ice shelves potentially directly affecting ice sheet behavior.*

The ECS 2023 award winners will receive their award certificate at the IACS plenary meeting on Saturday 15 July at the IUGG 2023 meeting in Berlin. The evaluation panel consisted of Regine Hock (Chair), Christine Hvidberg, Tómas Jóhannesson, Stanislav Kutuzov, Sophie Nowicki, Takenobu Toyota and Martin Truffer.



Veronica Tollenaar



Yixi Zheng

The IACS Early Career Scientist (ECS) award is a cash prize of €1000 awarded every two years to two early career scientists who have published the best scientific papers on a cryospheric subject as assessed by an ad-hoc evaluation committee.



Freshly-scoured metamorphic rock emerging from beneath the retreating Brewster Glacier in the Southern Alps of New Zealand. March 2023. Photo: Andrew Mackintosh.

## IUGG Assembly Berlin July

The IUGG General Assembly is approaching and includes many IACS related activities, award talks and side-meetings. Check our IACS homepage for further details on IACS activities and highlights at IUGG:

[Berlin 2023 – IACS \(cryosphericciences.org\)](http://www.cryosphericciences.org)

## About IACS

The International Association of Cryospheric Sciences (IACS) is a constituent Association of the International Union of Geodesy and Geophysics (IUGG).

IACS promotes and sponsors workshops, symposia and educational activities. IACS has targeted working groups on cryospheric topics.

IACS offers free individual membership:

[www.cryosphericciences.org](http://www.cryosphericciences.org)

The IACS newsletter is issued 2-4 times a year.

Previous newsletters: [cryosphericciences.org/](http://www.cryosphericciences.org/)

## IACS Code of Conduct

The International Association of Cryospheric Sciences (IACS) organises biennial scientific meetings, promotes and sponsors workshops, symposia and educational activities, and facilitates the creation of working groups, joint commissions and joint bodies on cryospheric topics.

IACS actively promotes and supports diversity, inclusion and equity. Our activities and meetings aim to provide a positive experience free of harassment for everyone, and to ensure an inclusive atmosphere that encourages the free expression and professional exchange of ideas and results. IACS opposes any discrimination based on factors such as age, citizenship, class, disability, ethnic origin, health, physical appearance, sex, gender identity, language, political or other opinion, religion or sexual orientation.

All participants in IACS activities and communications have a role to play in creating an inclusive environment through their own behaviour and by active allyship. We expect the following behaviour of organisers and participants in IACS business, sponsored activities and communications:

- Be considerate, respectful and collaborative. Avoid personal attacks by critiquing ideas rather than individuals.
- Do not engage in any forms of discrimination or harassment. Be mindful of your surroundings and of your fellow participants.

IACS may take any appropriate action necessary if participants engage in unacceptable behaviour, including removal from a meeting/event without warning or refund, exclusion from IACS bodies, or expulsion from IACS membership.

If you are subjected to unacceptable behaviour or witness behaviour that violates professional and respectful conduct in the context of any IACS activity, please immediately notify the local organiser of the event/meeting, or the IACS Secretary General or President for consideration by the IACS Executive Committee. All reports will remain confidential.

