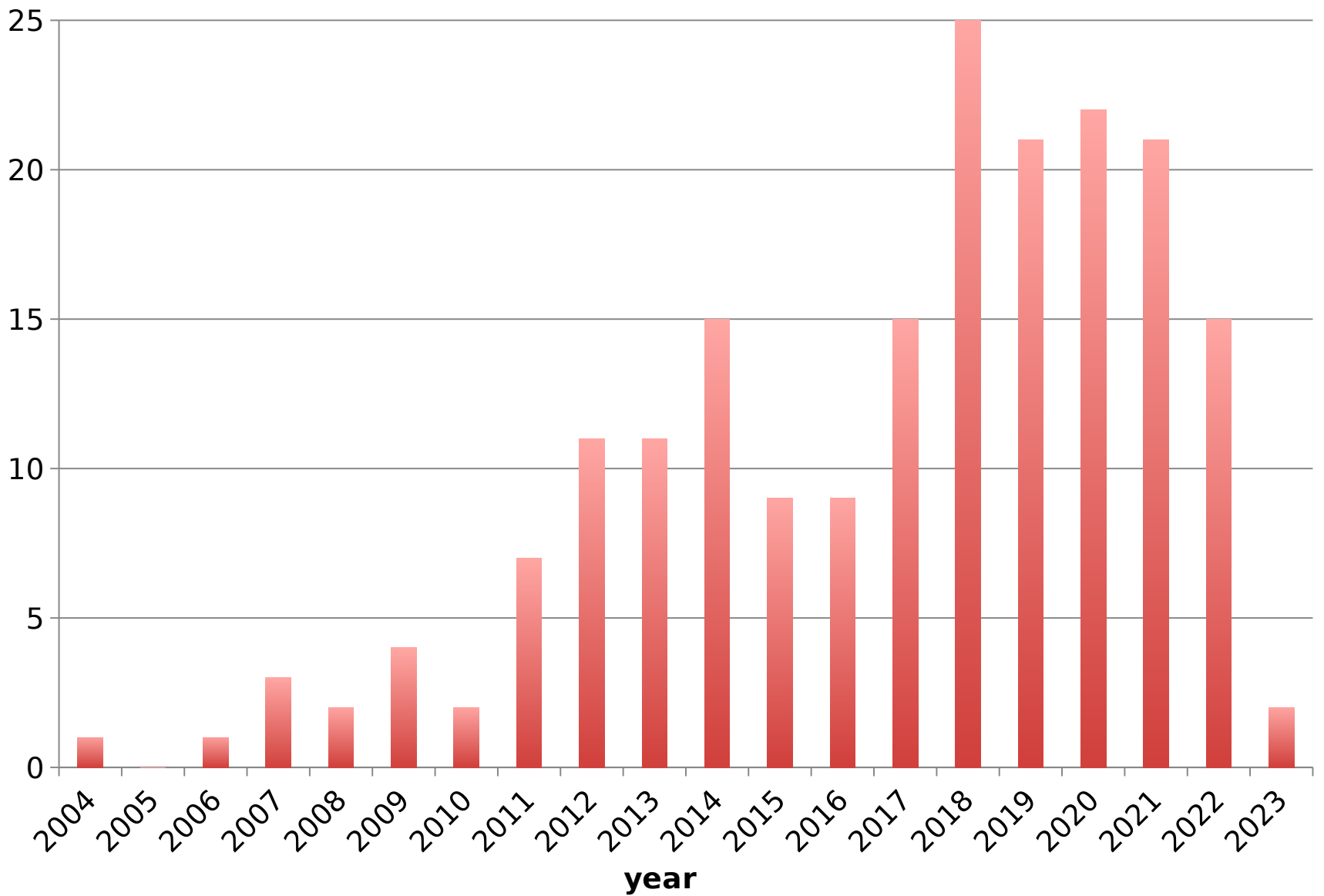


Elmer/Ice Splinter Meeting EGU 23

Elmer Stats and Programme

Number of Elmer/Ice publications



- Stansberry A, Harper J, Johnson JV, Meierbachtol T (2022). Millennial- scale migration of the frozen/melted basal boundary, western Greenland ice sheet. *Journal of Glaciology* 1–10. [https://doi.org/ 10.1017/jog.2021.134](https://doi.org/10.1017/jog.2021.134)
- Zhao W., L. Zhao, L. Tian, M. Wolovick and J.C. Moore, 2022. Simulating the Evolution of Da Anglong Glacier, Western Tibetan Plateau over the 21st Century. *Water*, 14(2), 271, doi:10.3390/w14020271
- Amundson, J., M. Truffer, and T. Zwinger, 2022. Tidewater glacier response to individual calving events. *Journal of Glaciology*, 1-10, doi:10.1017/jog.2022.26
- Benn, D. I., A. Luckman, J.A. Åström, A. Crawford, S.L. Cornford, S.L.. Bevan, T. Zwinger, R. Gladstone, K. Alley, E. Pettit, and J. Bassis, 2022, Rapid fragmentation of Thwaites Eastern Ice Shelf. *The Cryosphere*, 16, 2545–2564, doi:10.5194/tc-16-2545-2022
- Gilbert A., F. Gimbert, K. Thøgersen, T. V. Schuler and A. Kääb, 2022. A Consistent Framework for Coupling Basal Friction With Subglacial Hydrology on Hard-Bedded Glaciers, *Geophysical Research Letters*, 49, e2021GL097507, doi:10.1029/2021GL097507
- Vincent C., A. Gilbert, A. Walpersdorf, F. Gimbert, O. Gagliardini, B. Jourdain, J. P. Roldan Blasco, O. Laarman, L. Piard, D. Six, L. Moreau, D. Cusicanqui and E. Thibert, 2022. Evidence of seasonal uplift in the Argentière Glacier (Mont Blanc area, France). *Journal of Geophysical Research: Earth Surface*, 127, e2021JF006454. doi:10.1029/2021JF006454
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- Hoffman A. O., K. Christianson, N. Holschuh, E. Case, J. Kingslake and R. Arthern, 2022. The impact of basal roughness on inland Thwaites Glacier sliding, *Geophysical Research Letters*, 49, e2021GL096564, doi:10.1029/2021GL096564
- Jouvet G, G. Cordonnier, B. Kim, M. Lüthi, A. Vieli and A. Aschwanden, 2022. Deep learning speeds up ice flow modelling by several orders of magnitude, *Journal of Glaciology* 68(270), 651–664, doi: 10.1017/jog.2021.120
- Maier N., F. Gimbert and F. Gillet-Chaulet, 2022. Threshold response to melt drives large-scale bed weakening in Greenland, *Nature* 607, pages 714–720, doi:10.1038/s41586-022-04927-3
- Kang H., L. Zhao, M. Wolovick and J. C. Moore, 2022. Evaluation of six geothermal heat flux maps for the Antarctic Lambert–Amery glacial system, *The Cryosphere*, 16, 3619–3633, doi:10.5194/tc-16-3619-2022
- Young E. M., G. E. Flowers, H. Jiskoot and H. D. Gibson, 2022. Kinematic evolution of kilometre-scale fold trains in surge-type glaciers explored with a numerical model, *Journal of Structural Geology*, 161, 104644, doi:10.1016/j.jsg.2022.104644
- Barnett J. , F.A. Holmes and N. Kirchner, 2022. Modelled dynamic retreat of Kangerlussuaq Glacier, East Greenland, strongly influenced by the consecutive absence of an ice melange in Kangerlussuaq Fjord, *Journal of Glaciology*, 1-12, doi: 10.1017/jog.2022.70
- Henry A. C. J., R. Drews, C. Schannwell and V. Višnjević, 2022. Hysteretic evolution of ice rises and ice rumples in response to variations in sea level, *The Cryosphere*, 16, 3889–3905, doi:10.5194/tc-16-3889-2022
- Višnjević, V., Drews, R., Schannwell, C., Koch, I., Franke, S., Jansen, D., and Eisen, O.: Predicting the steady-state isochronal stratigraphy of ice shelves using observations and modeling, *The Cryosphere*, 16, 4763–4777, <https://doi.org/10.5194/tc-16-4763-2022>, 2022.
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- Morin, A., Flowers, G. E., Nolan, A., Brinkerhoff, D., & Berthier, E. (2023). Exploiting high-slip flow regimes to improve inference of glacier bed topography. *Journal of Glaciology*, 1-7
- Law, R., Christoffersen, P., MacKie, E., Cook, S., Haseloff, M., & Gagliardini, O. (2023). Complex motion of Greenland Ice Sheet outlet glaciers with basal temperate ice. *Science Advances*, 9(6), eabq5180.

Programme

Welcome and introduction (5 mins) 12:45-12:50

Talks (12:50-15:30)

- Eliot Jager: (12:50-13:10)
 - Elmer/Ice uncertainty quantification
- Fabien Gillet-Chaulet: (13:10 – 13:45)
 - Nonlinear Weertman sliding law in Stokes
 - Xios
 - Spatial covariance modelling
- Break (13:45-14:00)

Programme

- Peter Råback (14:00-14:30)
 - Improvements to particle advector (age, damage)
 - Automatic increase of element order (also for extruded meshes)
 - GMSH format-based restart and interpolation between different meshes (replacement for ASCII/binary restart files)
 - Improvements in radiation model (energy balance)
 - Reduced dimensional Navier-Stokes equations (basal hydrology)
- Cyrille Mosbeux (14:30-14:45)
 - Applications of new particle advector
- Josefin Ahlkrona (14:45-14:55)
 - FSSA (Free Surface Stabilisation Algorithm) applied to real-world glaciers
- Break (14:55 – 15:15)

Programme

- Thomas Zwinger (15:15-15:30)
 - Visco-elastic model for shear-thinning rheology
 - Calving developments
 - Further code-development plans
 - Repository code of conduct
 - Discussion about how to deal with DOI-citeable Elmer/Ice code as required by some journals

- **AOB and wrap-up (15:30-15:45)**