



11th Elmer/Ice Users meeting
8 Nov 2023
CSC, Espoo, Finland

Introduction

Program

9:00-9:10: Olivier Gagliardini (IGE): short introduction

9:10-9:30: Cyrille Mosbeux (IGE): Semi-Lagrangian solver

9:30-9:50: Thomas Zwinger / Peter Raback (CSC): Relevant Elmer(/Ice) code updates and policies

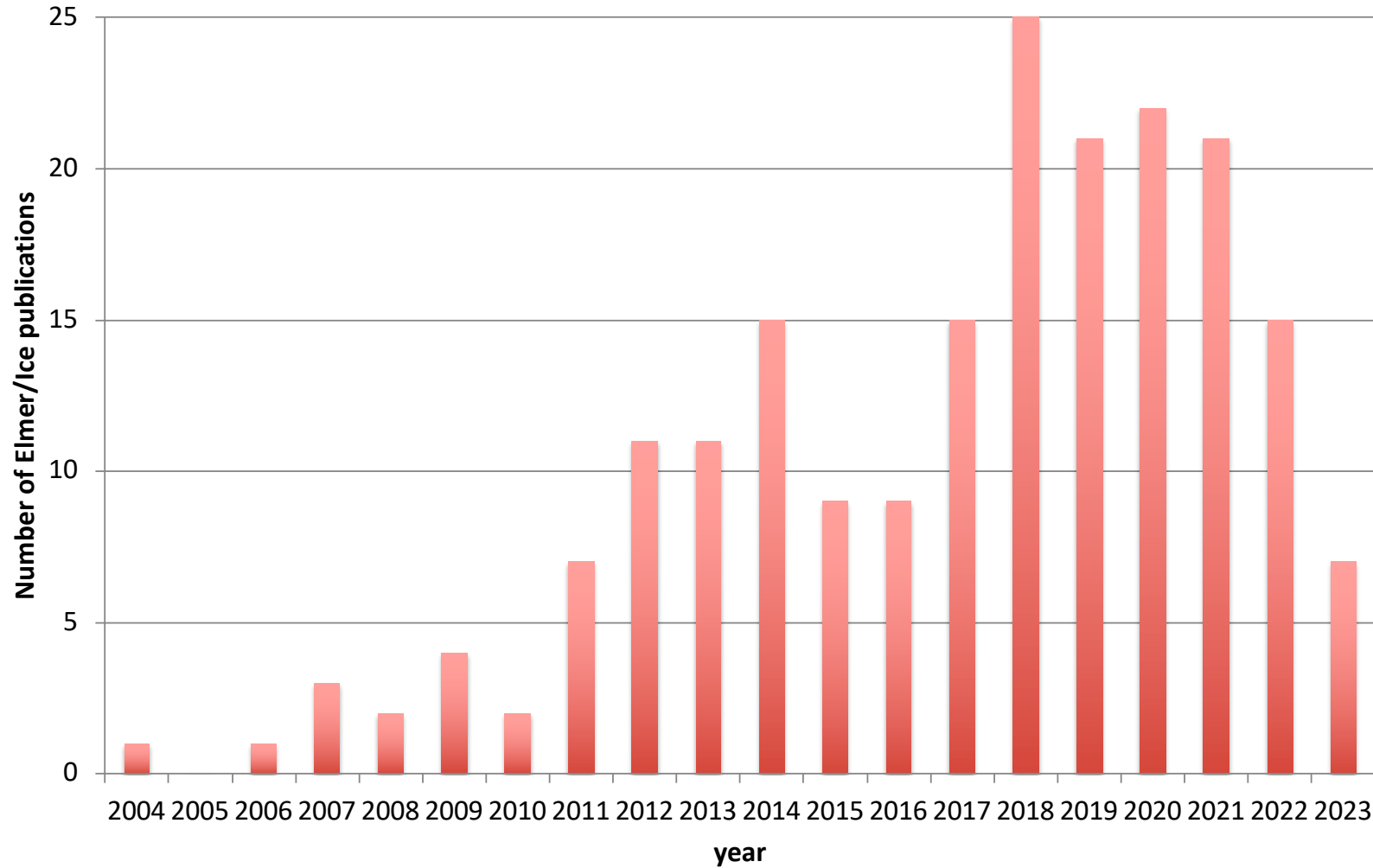
10:00-10:20: Rupert Gladstone (Univ of Lapland): Update on Finland/Tasmania work on GlaDS/Elmer Antarctic simulations

10:20-10:40: Fabien Gillet-Chaulet (IGE): The mass conservation method: "How" smooth should it be?

10:40-11:00: Adrien Gilbert (IGE): Surface Mass Balance solver

11:00-11:30: Discussion

Elmer/Ice - Numbers



201 publications

21 Courses ~ 400 participants

11 Elmer/Ice users meetings

Some points to be discussed

- Should we close the Elmer/Ice Twitter account? If yes, moving to which tool? Bluesky, Mastodon, Counter.Social, Diaspora,...?
- Is the vectorized Stokes solver still working with the contact machinery (grounding line, cavity)?
- Documentation: where are we?
- ?
- ??
- ???

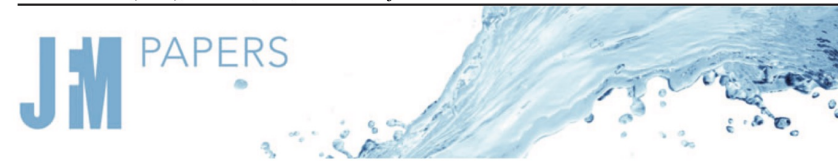
New vectorized Stokes solver and contact problem

- Should work right now if not using Weertman friction
- Should be working if just removing that lines in `modules/IncompressibleNSVec.F90`

```
1187      IF( HaveSlip ) THEN
1188          CALL Fatal('IncompressibleNSVec','You cannot combine different friction models!')
1189      END IF
```

- We should think about a better implementation of the contact using Lagrange Multipliers?

J. Fluid Mech. (2022), vol. 938, A21, doi:10.1017/jfm.2022.178



Numerical approximation of viscous contact problems applied to glacial sliding

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