

# Advanced Elmer/Ice workshop

## 22-24 November 2017, IGE, Grenoble, France

### Locations

3SR Lab, Galilée building, room #012 (see map) – Two first days  
1270 rue de la piscine  
F-38400 Saint martin d'Hères, France

IGE glaciology, Louis Lliboutry conference room – Third day  
54 rue Molière

Consult the [3SR website](#) to check how to come to Grenoble and Galilée building. We recommend booking an hotel in the city centre, close to the train and bus station (arrival/departure of the bus from/for airport Lyon Saint Exupéry) and tram B line (direct to campus). The Galilée building is 10 minutes walk from the stop “Bibliothèques Universitaires”. IGE glaciology is 2 minutes walk from stop

### Program

[Wednesday, 22 Nov 2017 – bat Galilée](#)

8h30-9h00 - Arrival of the participants

9h00-9h30 - Introduction words + round-table presentation (Olivier)

9h30-10h00 - Lower-order Stokes model (Fabien)

10h00-10h30 - Marine ice sheet/glacier and grounding line dynamics (Olivier)

10h30-11h00 - Coffee break

11h00-11h30 - Calving models in Elmer (Thomas)

12h00 Lunch (on your own expense)

13h30-14h00 - Inverse methods for ice flow (Fabien)

14h00-14h30 - Inverse methods for bed geometry (Johannes)

14h30-15h00 - Parallel computing (Thomas)

15h00-15h30 Coffee break

16h00-16h30 - Hydrology and friction (Olivier)

16h30-17h00 - Thermal regime of glacier (Adrien)

#### Thursday, 23 Nov 2017 – bat Galilée

9h00-10h00 - Ocean and ice coupling (Rupert & Nico)

10h00-10h30 - Programming your own solver/user functions (Thomas)

10h30-11h00 Coffee break

11h00-11h30 - Pre-processing (geometry, meshing) and Post-processing (Thomas)

11h30-12h00 - Development of a LevelSet approach to model complex biphasic media (Kevin)

12h00-13h30 Lunch (on your own expense)

13h30-14h00 – Remeshing (Fabien)

14h00-14h30 - Contributing code to Elmer(/Ice), Defensive programming (Rupert)

14h30-15h00 - Rate and state friction law for hard bed glaciers (Kjetil)

15h00-15h30 Coffee break

15h30-16h00 - 3D Modelling of ice rises in East Antarctica (Clemens)

16h00-16h30 - Ice flow modelling to constrain SMB and ice discharge in Patagonia (Gabriela)

16h30-17h00 – Modelling permafrost (Denis)

#### Friday, 24 Nov 2017 – IGE glaciology

9h00-12h00 Hands on to participants problems

12h00-13h30 Lunch (on your own expense)

13h30-15h30 Hands on to participants problems

15h30-16h30 Discussion about future plans, future developments, form of this workshop, etc...

16h30 End of the workshop

#### Local organiser committee:

Olivier Gagliardini and Fabien Gillet-Chaulet (IGE UGA / CNRS, Grenoble, France)

#### Sponsors:

Labex [OSUG@2020](#)

[CSC](#)

IGE UGA / CNRS

[3SR UGA](#), [Fed3G](#)

## Organisation:

The participation is free of charge. The participants have to organise and pay their travel and their stay in Grenoble. The labex OSUG@2020 is covering the fees for the travel costs of Thomas Zwinger and Johannes Fürst. All participants should bring their own laptop with Elmer (and Elmer/Ice) and a C, C++ and Fortran 90 compilers (with emphasis on Fortran) installed on it. Installation instructions are to be found on the [Elmer/Ice wiki](#).

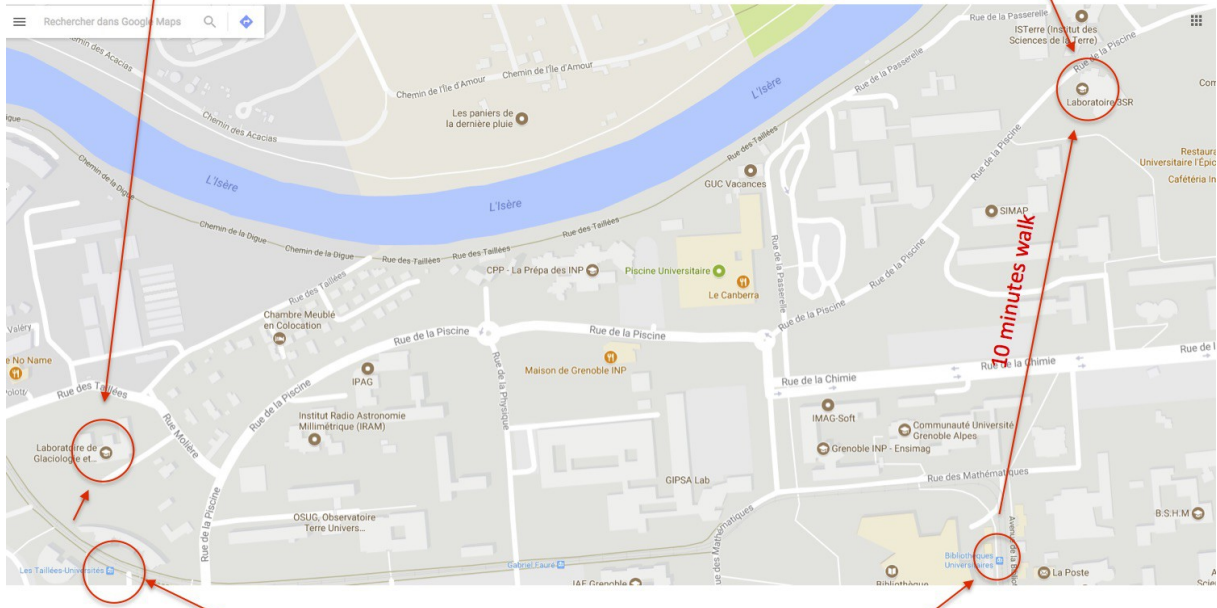
A virtual appliance that can be run in VirtualBox has been set up. It can be downloaded [here](#).

## List of Participants

Chekki Mondher (IGE Grenoble)  
Cohen Denis (New Mexico Tech Socorro NM)  
Collao Gabriela (IGE Grenoble)  
Cook Samuel (Scott Polar Research Institute, University of Cambridge)  
Favier Lionel (IGE Grenoble)  
Fourteau Kevin (IGE Grenoble)  
Fürst Johannes (University-Erlangen-Nuremberg)  
Gagliardini Olivier (IGE Grenoble)  
Gilbert Adrien (Department of Geosciences; University of Oslo)  
Gillet-Chaulet Fabien (IGE Grenoble)  
Gladstone Rupert (University of Lapland)  
Gong Yongmei (University of Helsinki)  
Helanow Christian (Department of Physical Geography, Stockholm University)  
Jourdain Nicolas (IGE Grenoble)  
Le Meur Emmanuel (IGE Grenoble)  
Nanni Ugo (IGE Grenoble)  
Petrakopoulos Konstantinos (NYU Abu Dhabi)  
Peyaud Vincent (IGE Grenoble)  
Schannwell Clemens (Department of Geosciences, University of Tuebingen)  
Scholzen Chloé (Department of Geosciences, University of Oslo)  
Thøgersen Kjetil (Department of Geosciences, University of Oslo)  
Zwinger Thomas (CSC Helsinki)

3<sup>rd</sup> day: IGE glaciology  
(ex LGGE)

1<sup>st</sup> and 2<sup>nd</sup> day:  
Galilée building



Tram B stop “Les Tailles-Universités” or C stop “Hector Berlioz-Universités”

Tram B or C stop  
“Bibliothèques Universitaires”