Git for (and by) experimentalists

Baptiste & Cyril

Déj' des Docs - Jan. 12, 2023

A few questions

- Who's an experimentalist? A numerician?
- Who's heard of Git/Github/Gitlab?
- Who's commonly using Git/Github/Gitlab?
- What do you use it for?

Git?

What is git for?

- versioning, tagging
- online storage/backup
- collaborations: multi-persons, multi-computers
- ~~data storage~~

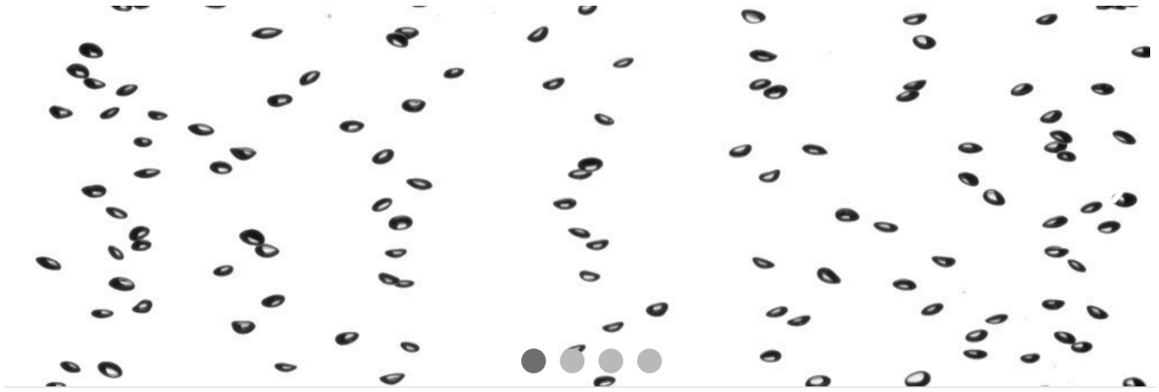
Why do we use it?

- personal page
- code/doc
- papers

Github pages

Baptiste Néel

Home Research Bio Publications



Welcome!

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With a physicist's background
strong experimental skills, I qu
consequences in our everyday
presently work as a postdoc w
squeezed in a Hele-Shaw cell.

CYRIL GADAL

RESEARCH | CV | PUBLICATIONS | GALLERY | CONTACT

CYRIL GADAL

POSTDOCTORAL RESEARCHER

Contact: cyril.gadal@imft.fr

ABOUT THIS SITE

I am a geophysicist, specialized in fluid dynamics and granular materials. I use a combination of laboratory experiments, numerical simulations and field studies to understand the dynamics of complex natural systems involving grains and/or fluids, such as dunes, turbidity currents or planetary impact craters. Currently, I am a postdoctoral researcher at the Institut de Mécanique des Fluides de Toulouse .

I obtained my PhD in Geophysics in 2020 from Université Paris Cité and Institut de physique du globe de Paris, and my Physics (fluid mechanics) and Earth Sciences master's degrees in 2017 from the Ecole Normale Supérieure of Paris.

LEARN MORE

Dylan Letessier...

Code & Doc

CoBubbles

CoBubbles stands for Collective Bubbles Simulations. It is a modular Python code for simulating bubbles on a plane (for instance, air bubbles at the surface of water).

Contents

Example

A minimal working example is demonstrated in this notebook.

Provided that `Simu` is defined properly, the following code instantiates a sim with the given parameters `params`:

```
from cobubbles.main import Simu
params = dict(lifetime=10)
s = Simu(**params)
s.params # or s.params_df for a view as a pd.Series
```

Then run the simulation for 100 steps and display a *time* series of bubbles n and mean size $\langle d/d_1 \rangle$ (figure output may be different for one run to the next

```
s.run(100)
s.plot_time_series()
```

Local wind regime induced by giant linear dunes Home page Paper figures Processing codes Python functions and modules

Search the docs ...

Codes for “Local wind regime induced by giant linear dunes”

This page contains the documentation of the codes used in the paper:

Local wind regime induced by giant linear dunes: comparison of ERA5-Land re-analysis with surface measurements.

Note

- the corresponding Github repository is https://github.com/Cgadal/GiantDunes
- the corresponding data are available here: DOI 10.5281/zenodo.6343138

test: `matplotlib.pyplot.scatter`

Documentation:

- Home page
- Paper figures
- Supplementary figures
- Processing codes
- Python functions and modules

Papers

or any other text

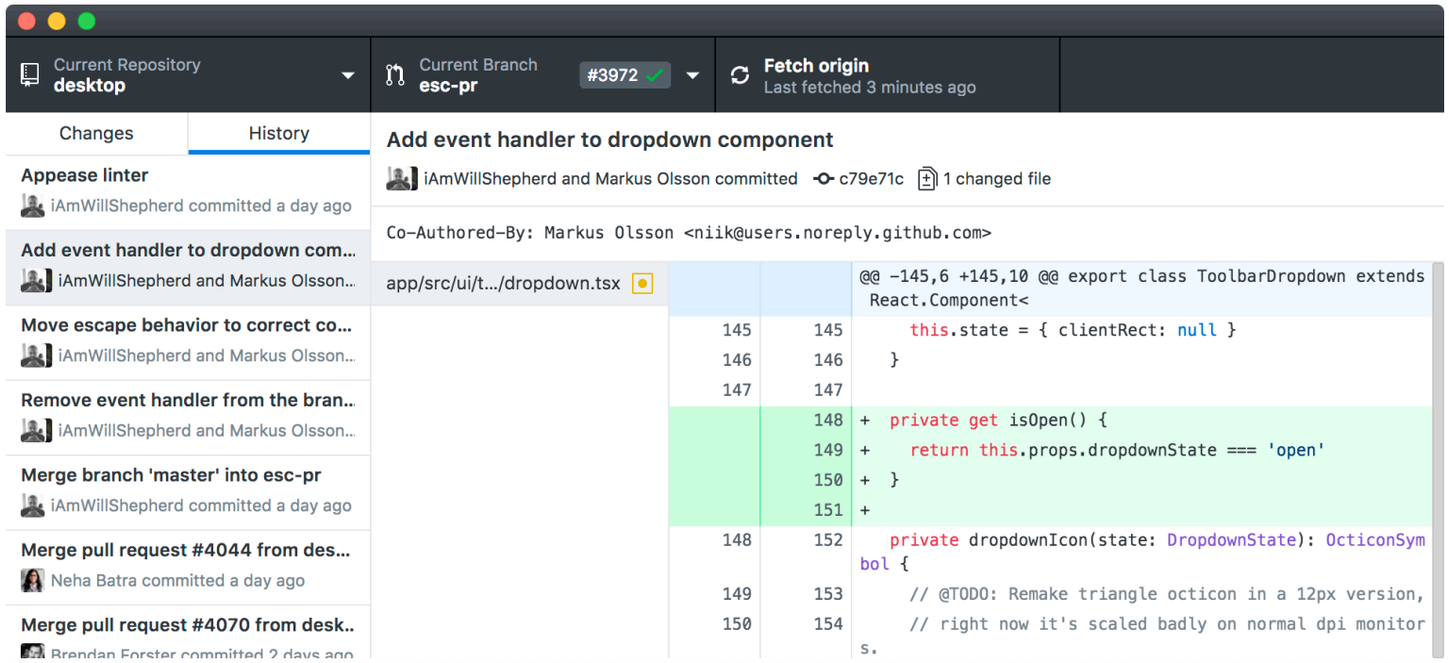
- Who's using Overleaf?
- Integration git+Overleaf: possible
- github.com/b-neel/2023-CNRS-IMFT
- github.com/Cgadal/GiantDunes

How to use it?

Different levels of geekiness

- Github Desktop
- github.com
- Atom, VSCode
- git

GEEK ++




```
b-neel.github.io$ git log -1
commit 31bb29448aa4c2139c99fd8aac67332a4970348d (HEAD -> gh-pages, origin/gh-pages, origin/HEAD)
Author: Baptiste Néel <45600677+b-neel@users.noreply.github.com>
Date:   Mon Jan 2 16:42:52 2023 +0100

    Update footer.html
```

Resources

- github.com, gitlab.com, www.atlassian.com/git
- git-scm.com/doc
- stackoverflow.com and tons of tutorials online
- overleaf.com
- wiki.imft.fr/cosinus/programmation (CoSiNus)
- gitlab.imft.fr