



Toward Open Science and Open Doctrine

I. Open Science: from practice to policy

Marie Farge

II. The Open Doctrine in the French style

Jean Gasnault



What is Open Science

Ideas are not of the same nature as material products,
since when you give an idea you do not lose it.

Knowledge is not a product to be traded
but a commons to be shared.

Open Science means sharing articles, codes and data.



*Charlotte Hess and Elinor Ostrom,
Understanding knowledge as a Commons,
MIT Press, 2006*

In 2009 *Elinor Ostrom* got ½ of the
Nobel prize in economic sciences for
*'her analysis of economic governance,
especially the commons, showing how
common resources can be managed successfully
by the people who use them, rather than
by governments or private companies'*.



Researchers design tools for Open Science

- In 1978 the computer scientist *Donald Knuth* (Stanford University) published the Open Software *TeX* for typesetting research articles, especially complex mathematical formulae.
- In 1990 the physicist and computer scientist *Tim Bernes-Lee* (CERN) created the Open Protocol *http* of *WWW* without patenting it, in order that it could be adopted by anyone.
- In 1991 the physicist *Paul Ginsparg* (Los Alamos National Laboratory) created the Open Platform *ArXiv* to share preprints for exact sciences, the submission rate today is above 10 000 articles/month.
- In 1994 the economist *Michael Jensen* (Harvard University) created the Open Platform *SSRN* to share preprints for social sciences, the largest repository in 2013 but *Elsevier* bought it in 2016.
- In 1998 the education scientist *John Willinsky* (Simon Fraser University) released the Open Software *OJS* to manage editing and peer-reviewing, used today by about 10 000 of research journals.



Dissemin, a platform to foster Open Science

In 2014 the computer scientist *Antonin Delpuch*, while he was student at ENS Paris, created the platform <http://dissem.in> to help researchers to deposit their articles in open access.



Dissemin is collectively developed in **Open Source** and **anyone can download it for free** from the platform *GitHub*.

Dissemin lists the articles of any researcher

Welcome to dissemin

Dissemin detects papers behind pay-walls and invites their authors to upload them in one click to an open repository.

Type here the first name and family name of a researcher from any discipline

Search

Green open access

Many researchers do not use their right to make their papers freely available online, in addition to the paywalled version offered by traditional publishers.

This forces libraries to buy overpriced electronic subscriptions to journals, when they can afford them at all.



Open repositories

Uploading your papers on your own webpage is not enough. Such copies are less stable and harder to find than documents uploaded to well-indexed repositories.

Dissemin searches for copies of your papers in a large collection of open repositories and tells you which ones cannot be accessed.

Dissem.in crawls the metadata of about 100 Millions research articles

[FAQ](#)
[API](#)
[Terms of Service](#)

[Who are we?](#)
[Donate](#)
[Partners](#)

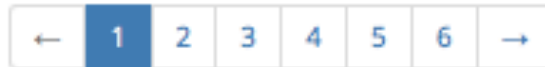
hello@dissem.in
[@disseminOA](#)
[GitHub](#)

Change language

English



Anyone can **download** for free **any article** which is **already in open access**, **wherever it is stored**



Seung-Bu Park, Pierre Gentine, Kai Schneider, **Marie Farge**

2016

Coherent Structures in the Boundary and Cloud Layers: Role of Updrafts, Subsiding Shells, and Environmental Subsidence


 Download

American Meteorological Society, *Journal of the Atmospheric Sciences*, 2016.



Frank G. Jacobitz, Kai Schneider, Wouter J. T. Bos, **Marie Farge**

Structure of sheared and rotating turbulence: Multiscale statistics of Lagrangian and Eulerian accelerations and passive scalar dynamics

 Download


American Physical Society, *Physical Review E*, 1(93), 2016.



Marie Farge, Kai Schneider

2015

Wavelet transforms and their applications to MHD and plasma turbulence: a review

 Download

Cambridge University Press (CUP), *Journal of Plasma Physics*, 06(81), 2015.

Researcher

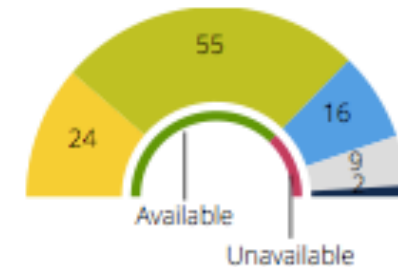
Marie Farge

0000-0002-4445-8625

★ École normale supérieure

☆ Département de géosciences

106 publications



Available from the publisher 24

Available from the author 55

Could be shared by the authors 16

Unknown/unclear sharing policy 9

Publisher forbids sharing 2

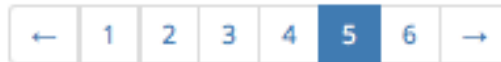
Refine search

By document type:


- Journal article
- Proceedings article
- Book chapter
- Book
- Journal issue




Any author can upload for free his/her articles which are not yet in open access :



Marie Farge, Kai Schneider, Giulio Pellegrino, Alan A. Wray, Robert S. Rogallo 2003
Coherent vortex extraction in three-dimensional homogeneous turbulence: Comparison between CVS-wavelet and POD-Fourier decompositions

 Upload | American Institute of Physics, Physics of Fluids, 10(15), 2003.

Kai Schneider, Marie Farge
Coherent Vortex Simulation (CVS) of 2D bluff body flows using an adaptive wavelet method with penalisation

 Upload | Springer Verlag, Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2003

Bartosz Protas, Kai Schneider, Marie Farge 2002
Geometrical alignment properties in Fourier- and wavelet-filtered statistically stationary two-dimensional turbulence


 Upload | Physical Review E, 4(66), 2002.

Kai Schneider, Marie Farge
Adaptive Wavelet Simulation of a Flow around an Impulsively Started Cylinder Using Penalisation

 Download | Elsevier, Applied and Computational Harmonic Analysis, 3(12), 2002.


Researcher

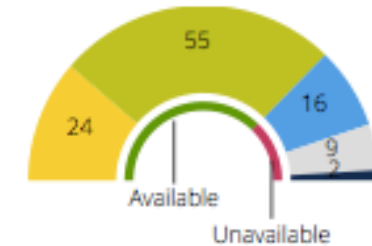
Marie Farge

 0000-0002-4445-8625

★ École normale supérieure

☆ Département de géosciences

 106 publications



 Available from the publisher 24

 Available from the author 55

 Could be shared by the authors 16

 Unknown/unclear sharing policy 9

 Publisher forbids sharing 2

Refine search

By document type:

- Journal article
- Proceedings article
- Book chapter
- Book
- Journal issue
- Proceedings
- Entry
- Poster
- Report
- Thesis
- Dataset
- Preprint
- Other document




Depositing "Coherent vortex extraction in three-dimensional homogeneous turbulence: Comparison between CVS-wavelet and POD-Fourier decompositions"

You can deposit the full text of your article. Dissemin will send it to a repository where it will be made freely available. By depositing your article on Zenodo via Dissemin, you agree to our [terms of service](#).

Document

Select here the full text of your article. PDF files only, maximum size: 20.0 MB.

Select a file:

 Browse

Or enter an URL:



Or drop a file here:

Options

Upload type:

- Preprint: archiving allowed.
- Postprint: archiving allowed.
- Published version: archiving allowed.

[Policy details \(opens in a new window\)](#).

Data provided by  SHERPA/RoMEO

Repository: **Zenodo**

Metadata


 Deposit

Published in

American Institute of Physics, Physics of Fluids, **10**(15), 2003

DOI: 10.1063/1.1599857

Links

[American Institute of Physics](#) 

Tools

[Search in Google Scholar](#)

[Search in CORE](#)

One click
to choose
the version
to deposit

Depositing "Coherent vortex extraction in three-dimensional homogeneous turbulence: Comparison between CVS-wavelet and POD-Fourier decompositions"

You can deposit the full text of your article. Dissemin will send it to a repository where it will be made freely available. By depositing your article on Zenodo via Dissemin, you agree to our [terms of service](#).

Document

Select here the full text of your article. PDF files only, maximum size: 20.0 MB.



179.pdf
11 pages
221.49 KB
[Change](#)

**One click
to deposit
in Zenodo**

Options

Upload type: **published version** (● archiving allowed)

Repository: **Zenodo**

Metadata

 Deposit

Published in

American Institute of Physics, Physics of Fluids, **10**(15), 2003

DOI: 10.1063/1.1599857

Links

[American Institute of Physics](#)

Tools

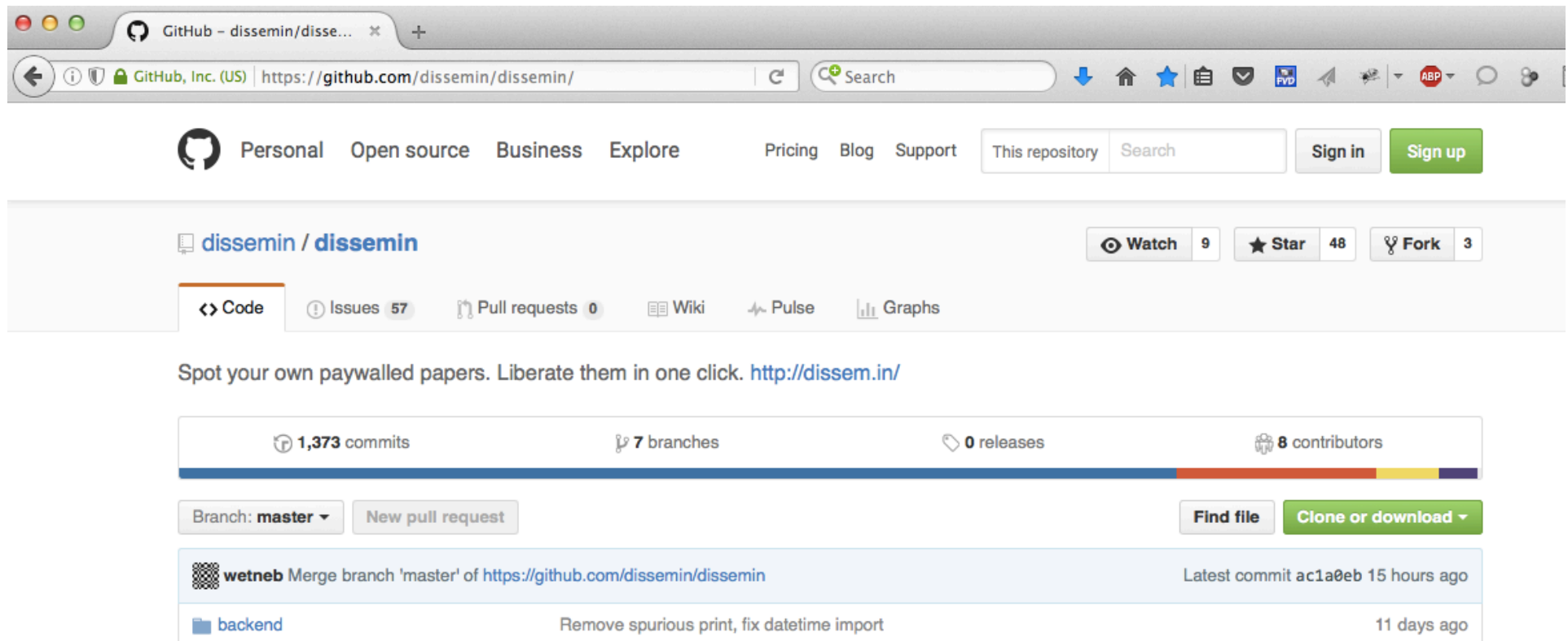
[Search in Google Scholar](#)

[Search in CORE](#)

Zenodo is the open repository of *CERN*. It accepts any research outputs from any fields. It is developed in *Open Source* with the *Invenio* framework under the licence *GNU GPL version 2*. It is financed by the *European Commission* as part of the European network *OpenAIRE*.

The source of *Dissemin* is free on *GitHub*

Dissemin is written in *Python* and published under the viral licence *AFFERO GPL 3*, which allows everyone is to use, modify and distribute its source code, under the condition that the source of a new version and the source of the website to access it are under the same licence.



The screenshot shows the GitHub repository page for `dissemin/dissemin`. The browser address bar shows the URL `https://github.com/dissemin/dissemin/`. The repository page includes navigation links for Personal, Open source, Business, and Explore, along with buttons for Sign in and Sign up. The repository statistics show 9 Watchers, 48 Stars, and 3 Forks. The repository description is "Spot your own paywalled papers. Liberate them in one click. <http://dissem.in/>". The repository has 1,373 commits, 7 branches, 0 releases, and 8 contributors. The current branch is `master`. A recent commit by `wetneb` is shown, titled "Merge branch 'master' of https://github.com/dissemin/dissemin", with the latest commit `ac1a0eb` made 15 hours ago. A file named `backend` is listed with the commit message "Remove spurious print, fix datetime import" and a commit date of 11 days ago.


The team *CAPSH / Dissemin*

Dissemin runs on three rented servers that cost 100 €/month.

It is financed by the non-profit association *CAPSH (Committee for the Accessibility of Publications in Sciences and Humanities)* created in 2015 by three computer science students and a mathematician (ENS Paris):



Antonin Delpauch,
the main developer of Dissemin.

In 2016 he was nominated
Europe's Open Access Champion by  .



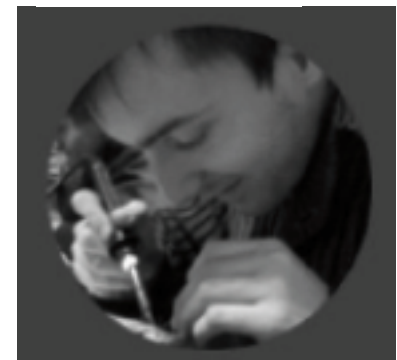
Antoine Amarilli



Pablo Rauzy



Marie Farge



Thomas Bourgeat

Open Science needs a new policy



In 2012 the mathematician *Sir Tim Gowers* called to boycott *Elsevier* and created *COK* (*Cost of Knowledge*), a group of mathematicians that stopped the *Research Works Act*, a bill proposed to the US Congress due to the lobbying of *Elsevier*. *COK* proposed a new model for online publishing called '*Diamond Open Access*':

- Neither author nor reader should have to pay to publish online,
- Research journals should belong to their editorial boards, which are in charge of peer-reviewing, but no longer to publishers,
- Online peer-reviewing and publishing of research journals should be done using public infrastructures developed in open source.'

Marie Farge, Note for the French Minister of Research, June 29th 2012
http://openscience.ens.fr/MARIE_FARGE/

<https://www.centre-mersenne.org>



*'Scholarly publishing and peer-reviewing in open access' by Marie Farge,
in 'Europe's Future: Open Science, Open Innovation, and Open to the World',
European Commission, DG Research, Science and Innovation, April 2017*

*http://openscience.ens.fr/MARIE_FARGE
<marie.farge@ens.fr>*



The open doctrine in the French style

2nd part

"I've changed, know it, but I'm as I was
before" (Barbara, Marienbad)

Introduction

- At the crossroads of two universes: **exact sciences** and **human and social sciences**
- Different university cultures almost opposed to each other
- A major change: **open science**
- Common challenges and responses
 - Find scientific works and harmonize their description
 - Organize the sharing and the disclosure of this knowledge
- The Progress of research necessarily requires sharing - no **losses**, only **gains**

Open Doctrine and FALM

- Despite longstanding efforts to promote open access to legislation and case law undertaken by the Free Access to Law Movement (FALM), where do things stand in terms of free and open sharing of scientific knowledge?
- Open Doctrine is an old issue for the FALM: Declaration on Free Access to Law “Therefore, the legal information institutes agree .../... Academic exchange of research results. » (added to the Paris conference – 2004)
- Actors of the FALM involved in the constant growth of open doctrine, examples :
 - CAnLII's involvement in the development of the CAIJ, (an example of the long-term viability of the freemium model),
 - presence of the US LII in the Durham statement
- Many publications of members of the FALM on open access to the law in the Legal SSRN and DOAJ journals

Legal recognitions

- European Union and HCCH recommendations (2012), (annex, art. 1, par. 2) : *“State Parties are also encouraged to make available for free access relevant historical materials, including preparatory work and legislation that has been amended or repealed, as well as relevant explanatory materials”*
- Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities, 2003
- Horizon 2020 : European Union organisation for Open science

In France, due to successive reforms of doctoral studies, the research world opens up step by step

Last major step : **october 2016** law for a digital republic (known as the Lemaire Law)

Art. 30 of the Lemaire Act

- **Now** Article **L533-4** of the French Research Code (very simplified version): **free access** within one year to a scientific article written with public funding
- In France, this article marks the first significant victory for digital commons advocates.
 - **unfortunately**, not only is this measure poorly enforced, but it has been given very little publicity by the government and none by the operators of the knowledge market.
 - Despite clear principles, and regulations that strictly apply them, the French implementation of open science remains laborious.

And now ?

- Might this be construed as symbolic of open science? One can only **hope** that the situation will change.
- The French government has reiterated its commitment to the expansion of open science in the Etalab action plan for **2018-2020**
- But on the **ground**, the situation is more **subtle**, that's what we're going to see now for Open Science and Open Doctrine.

Law ? A science ?

- Open science and law, how many **parsecs** ? In fact, very **near**.

Yes, law is a language, yes, it is an art, but it is increasingly confronted with science (statistics, AI, etc.) and is gradually taking on its uses

- The approaches of the disciplines (exact sciences and law) are scattered, sometimes in conflict (on principles or technical solutions), but progress in each discipline converges.
- "the truth is in the negative of appearances" (Hegel)

Some facets of Open doctrine

- Legal Compliance
- The technical side
- The sociological and cultural aspect
- The pedagogical aspect
- Economic feasibility
- The marketing approach

Legal obligations and practices

Mandatory deposit if publicly funded in a [digital directory](#)

Minimum accessibility that opens slowly: university intranet first, then open access and soon translated funds

Various uses for various types of authors and types of works

- Lawyers: open access (US [Lexology](#) database to the French Wiki GBD)
- Doctors of Law: open if everyone agrees, starting with the author
- Authors of other research works : according to the need of the moment: to be read absolutely by everyone, to be counted as a research activity, or to remain on good terms with your publisher

Sharing knowledge: a world of apparent paradoxes

- Share your knowledge or make a career? How about both?
- Between researchers and French academic bodies or outside France and outside its native language?
- Law French researchers probably do not need the **SETHI** program to understand that they are not alone in thinking about law in the Universe, or even on Earth

Pedagogies

- Encourage to describe and then share your work
 - The virtuous action of documentation centres
 - Awareness of the teaching world
 - Doctoral school recommendations
 - And their inevitable administrative corollaries (avoid complicating the filing, and threatening authors)
- E-learning supports, MOOC are multiplying and their authors are finally talking to each other
- Human support is essential to convince, train and help

From the descriptive sheet to the meta-data

- Minimum principle: all research work must be described - metadata must be freely accessible, and the public physical location of the work must be known to all
- Practical implementation: various platforms have emerged: local and national - national institutions in charge of scientific and technological information and the management authorities of researchers have begun to work together to put some order into the situation.
- An unavoidable necessity: the harmonization of the metadata structure (starting from the Dublin Core as a minimum to be guaranteed) in accordance with international standards

Full text open access ? Golden Way ?

- The various actors do not have the same visibility needs, some must show all their work, others can limit their consultation to a small committee of readers
- Should everyone have free access to all the necessary legal knowledge?
- The impact on the economic model of this envisaged progress must be measured. Free access release of documents that no longer sell at all is beginning to be practiced.
- Discussing with the market is now essential, knowing that all the solutions found will be scalable in essence, drawing inspiration from solutions found outside of France
- Better inform French actors about the foreign practice of disseminating Legal Doctrine: EU policy, North American practices, emerging countries

Open Thesis Award : a quick summary

- Audience: any doctor of law who defended his thesis between January 1, 2016, and December 31, 2018, and who submitted it freely in the HAL directory with the authorization of his jury, respecting the ABES referencing standards
- Calendar: end of 2018 writing of the official competition rules and recruitment of the jury, opening at the beginning of 2019, the proclamation of the prize at the Village de la Legal Tech at the end of 2019 (meeting co-organized by Open Law every year)
- Purpose: to reward positive actors, to motivate doctors of law to open access to the full text of their thesis in a public digital archive and to use the event to promote an open international common fund of legal knowledge
- Reward: a support to the publication on paper, associated with a very wide diffusion of this thesis on the Internet

Conclusion

- Opening Doctrine in France is a very long way trip.
 - Start since the beginnings of the Internet (1995)
 - Very slow progress
 - Multiple attempts and many failures
 - Mistrust and constant fear of the university community
 - But, but, but ...
- Times are changing, now!