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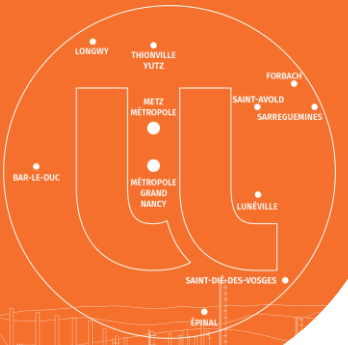
Monitoring Open Science at the University of Lorraine

LIBER 2021



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Some numbers...

- A multidisciplinary university
- 60,000 students
- 54 sites throughout Lorraine (Nancy, Metz)
- 60 research laboratories
- 2,400 researchers
- Nearly 1,800 doctoral students

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2016

- Opening of the HAL-UL portal
- Internal seminar Management and valorization of publications and research data

2017

- Hiring of a data librarian (replaced in 2019)
- Survey of laboratory directors about their data production

2018

- HAL official bibliography of the UL (decision of the Board)
- 1st Open Science symposium

2019

- Setting up of an Open Science Steering Committee and appointment of an Open Science Project Manager
- 2nd symposium on Open Publications

2020

- 3rd symposium on Research data
- Launch of the data repository project
- Lorraine Barometer of Open Science

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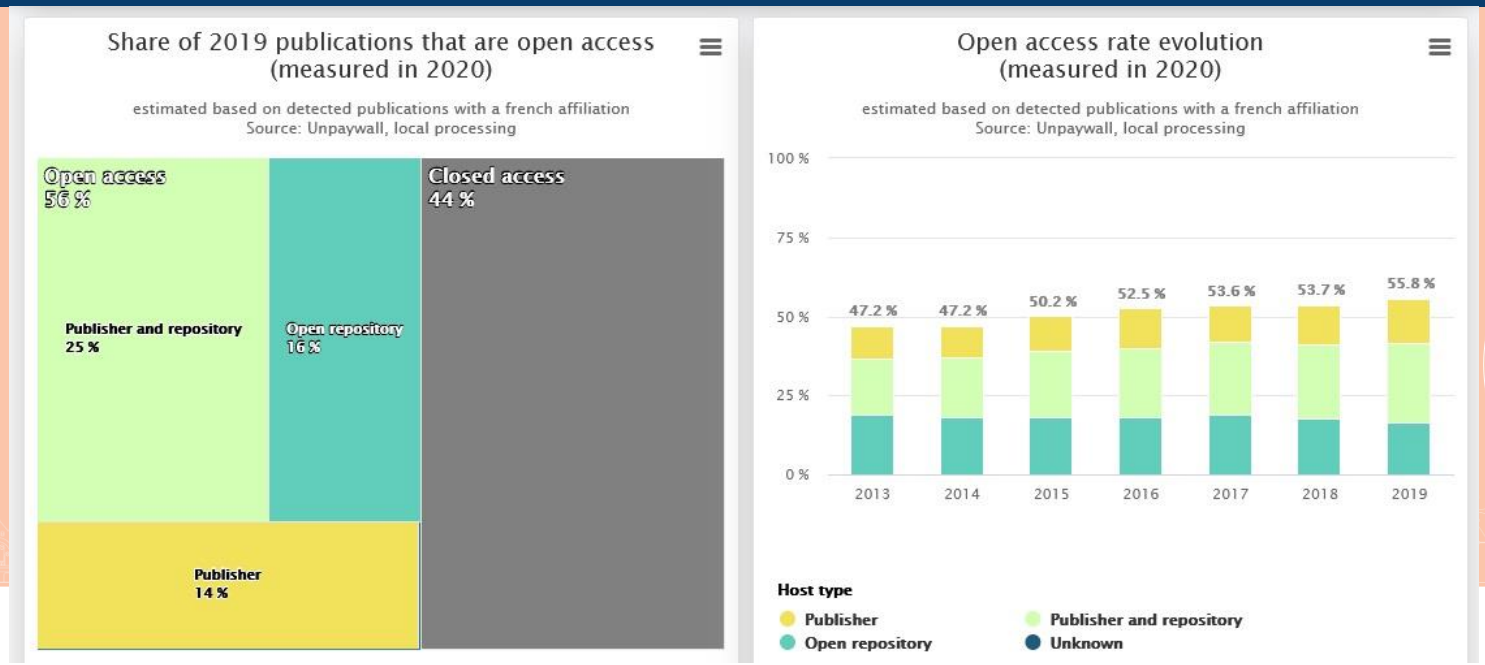
In 2019, the Ministry of Higher Education, Research and Innovation publishes the French Open Science Monitor



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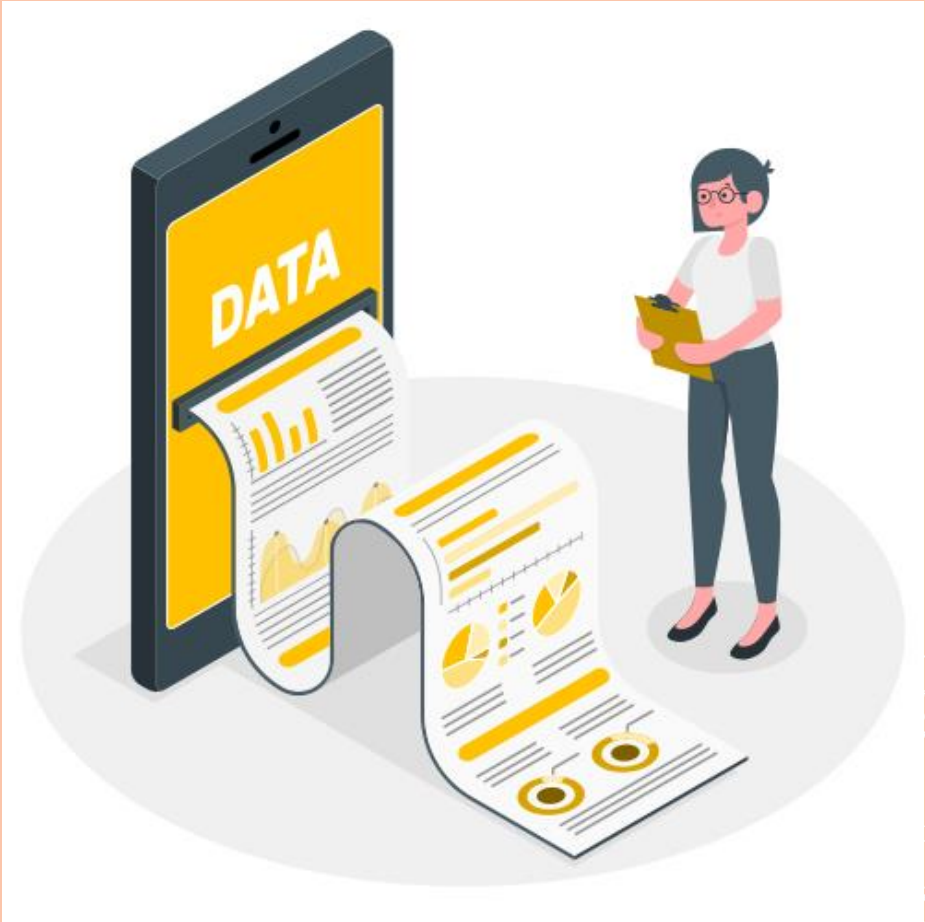
- The datasets are freely reusable on data.gouv.fr
- The data processing scripts are open source, written in Python
- Why not adapt it for the University of Lorraine?

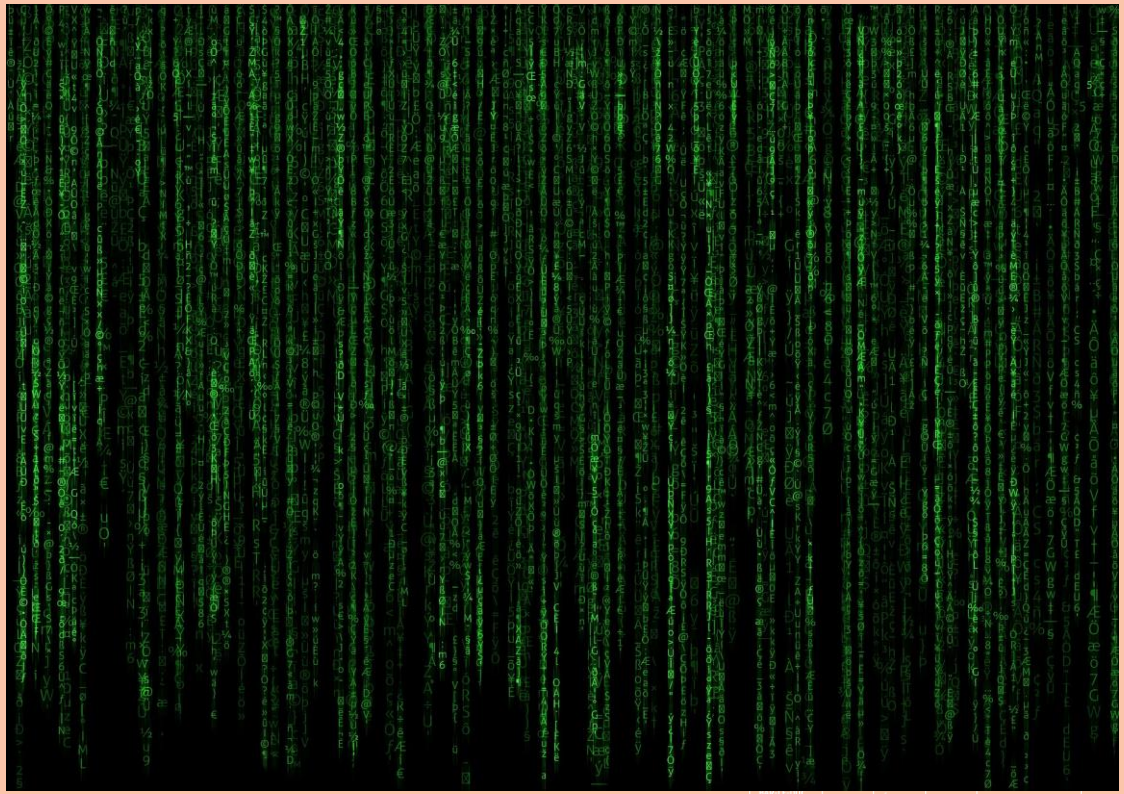
- 1st challenge: to isolate the production of the University of Lorraine
- Crossing of 5 sources: Web of Science, PubMed, HAL-UL, Lens.org, APC payment tracking
- Writing of data processing scripts, which do not exist at the national level, to obtain DOIs
- Identification of nearly 20,500 publications for 2016-2020



- 2nd step: to write the codes to generate the graphs in Python (those of the National Monitor being written in JavaScript)

- Then gather all the codes in a coherent set

- The script allowing to add to DOIs the open access status (coming from Unpaywall) and the discipline (realized by the Ministry) is reused from the code of the National Monitor



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- A guideline in this work: to think about potential reuse
- Choice of open source tools: Gitlab, Jupyter Notebooks
- Systematic use of comments to explain how to use the code

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Nettoyer les données issues du Web of Science

Comprendre comment est structuré le fichier

On ouvre le premier fichier puis on utilise la méthode de liste **split** pour voir une ligne (la 4ème, par exemple).

```
with open("Data/raw/2016/wos_lorraine_2016.txt") as f:
    wos_string = f.read()
```

La ligne ci-dessous permet de voir à quoi ressemble la 5ème ligne du fichier (en Python, la numérotation commence à zéro).

```
wos_string.split("\n") [4]
```

```
'J\tMezin, Andre; Hemel-Manquin, Audrey\t\t\t\t\t\t\t\tDecohesion and rupture mechanisms of a multilayered
```

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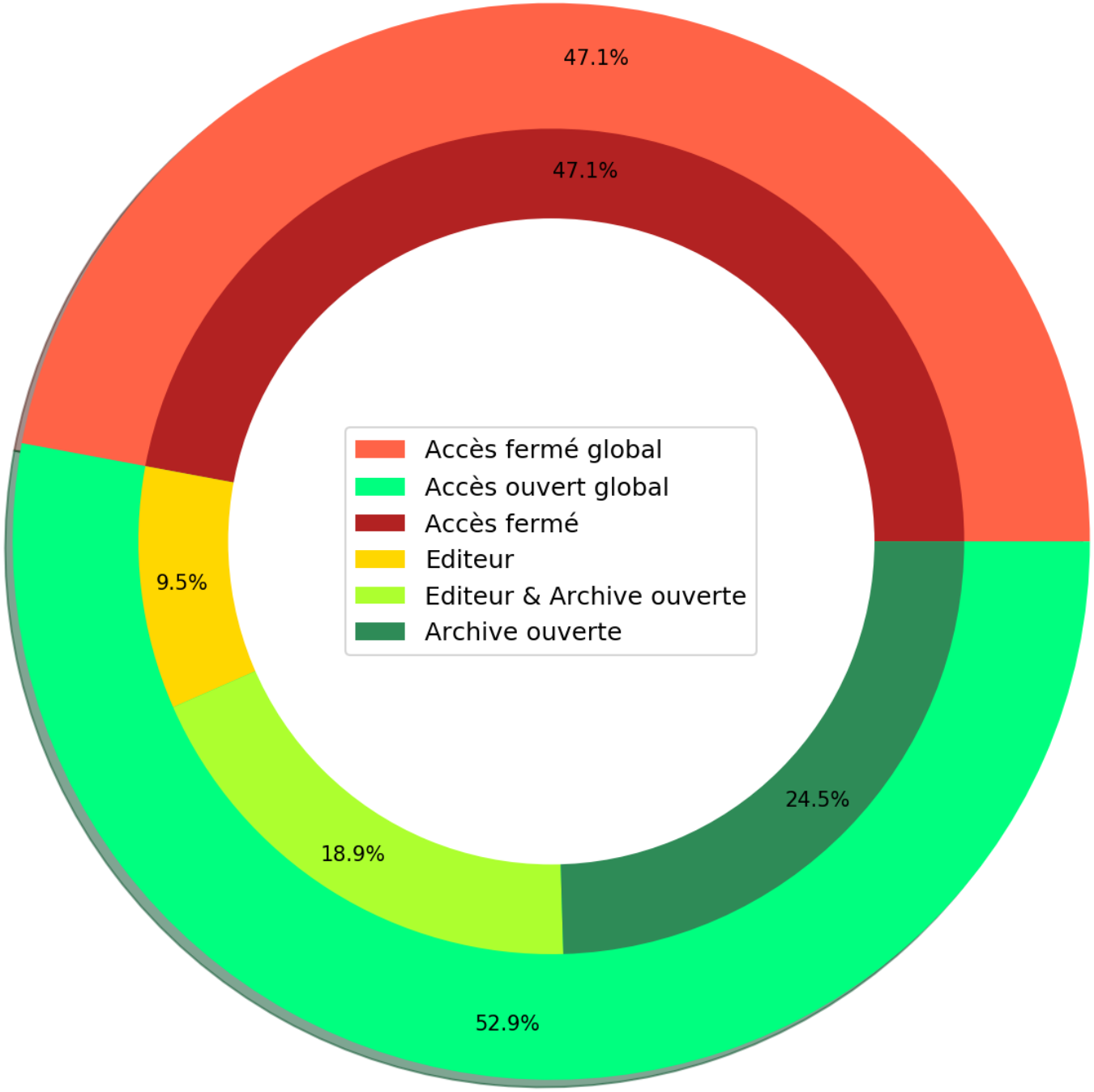
Proportion of open access publications in 2019

Synthetic vision of one year

All graphs are available online



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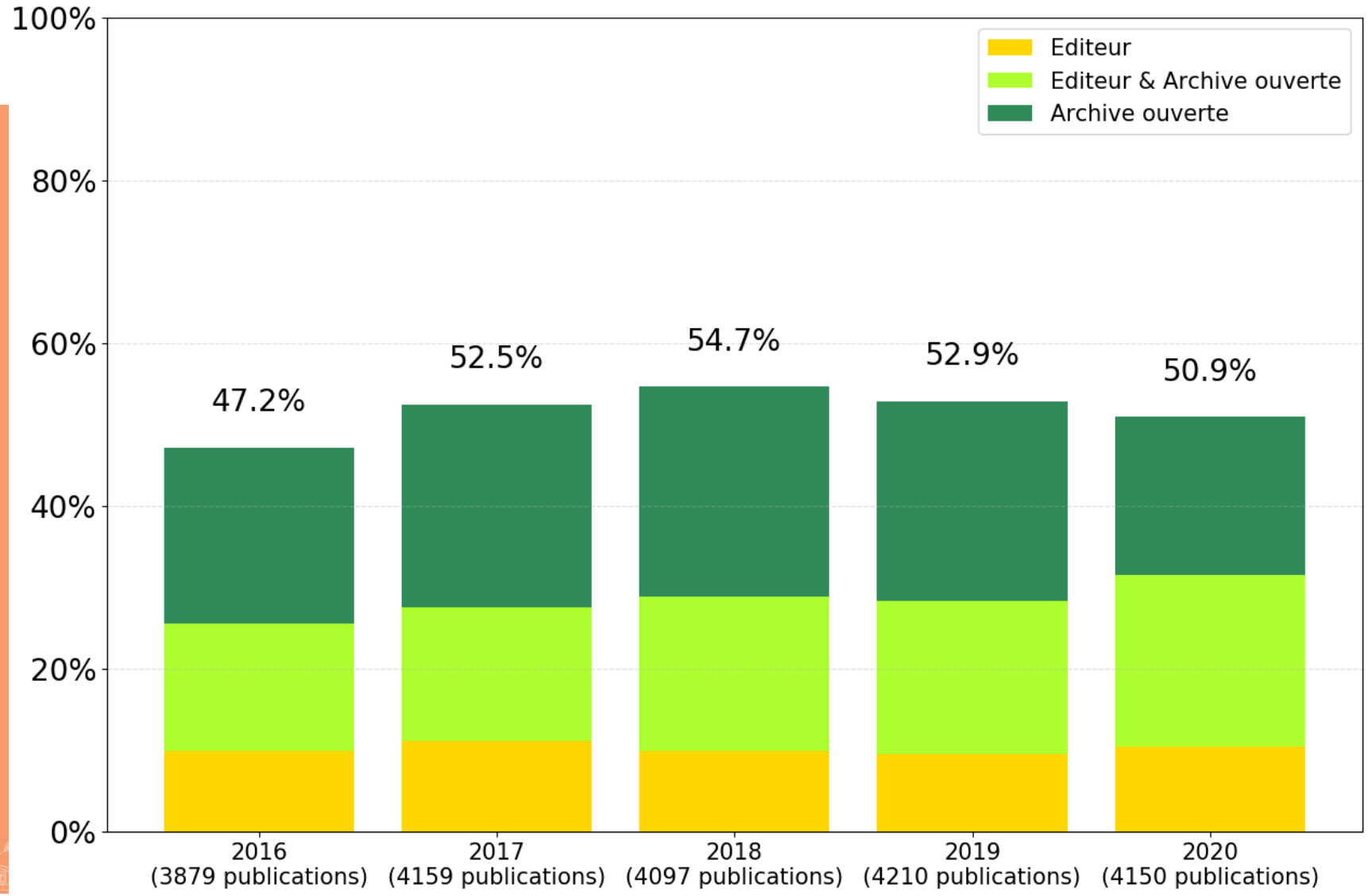
Evolution of open access publications 2016 - 2020

Evolution by year: a logically lower rate in 2020 due to mobile barriers



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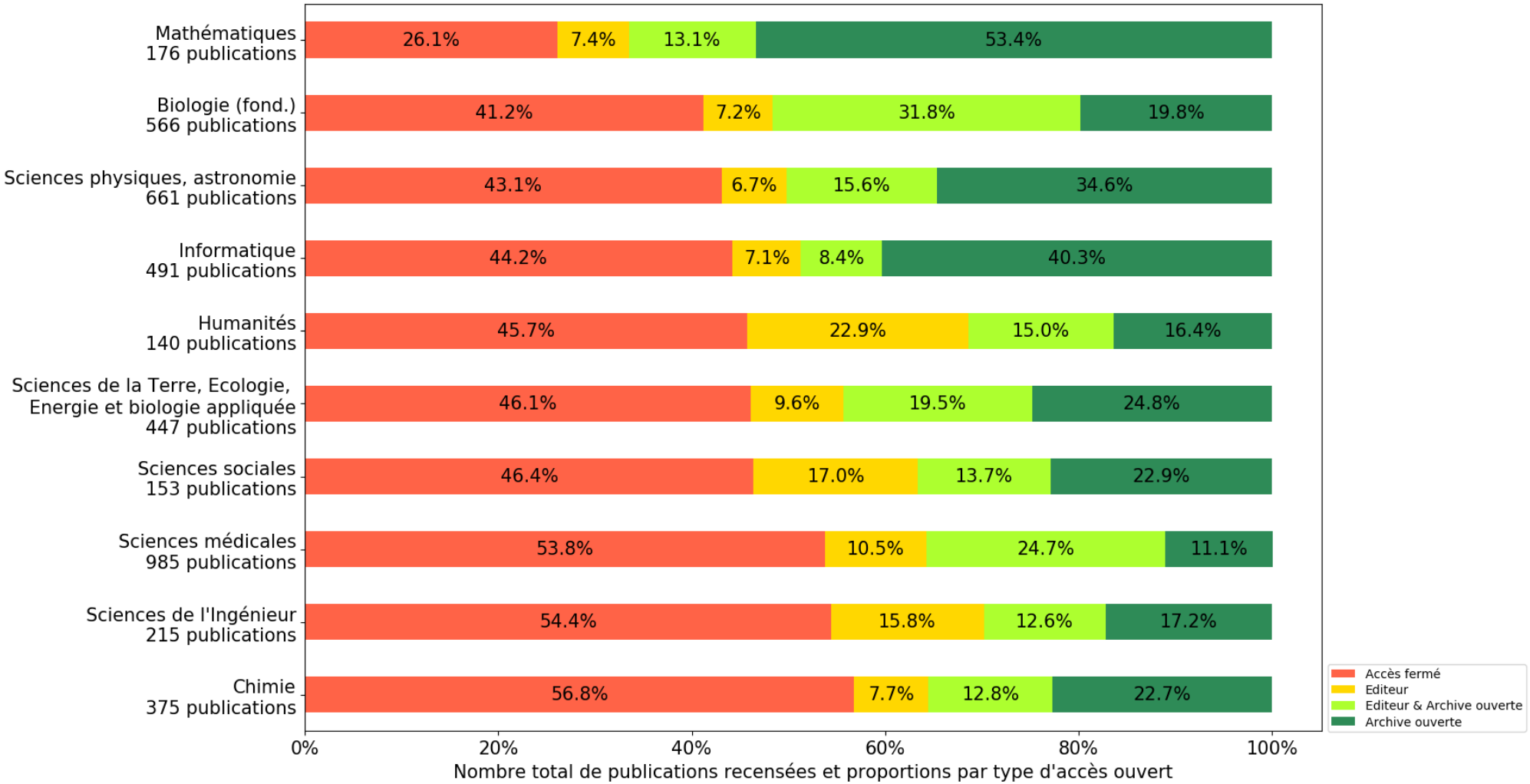
Open access to publications by discipline in 2019

Strong disciplinary disparities.

Chemistry : an open access rate from 29.7% to 43.2%



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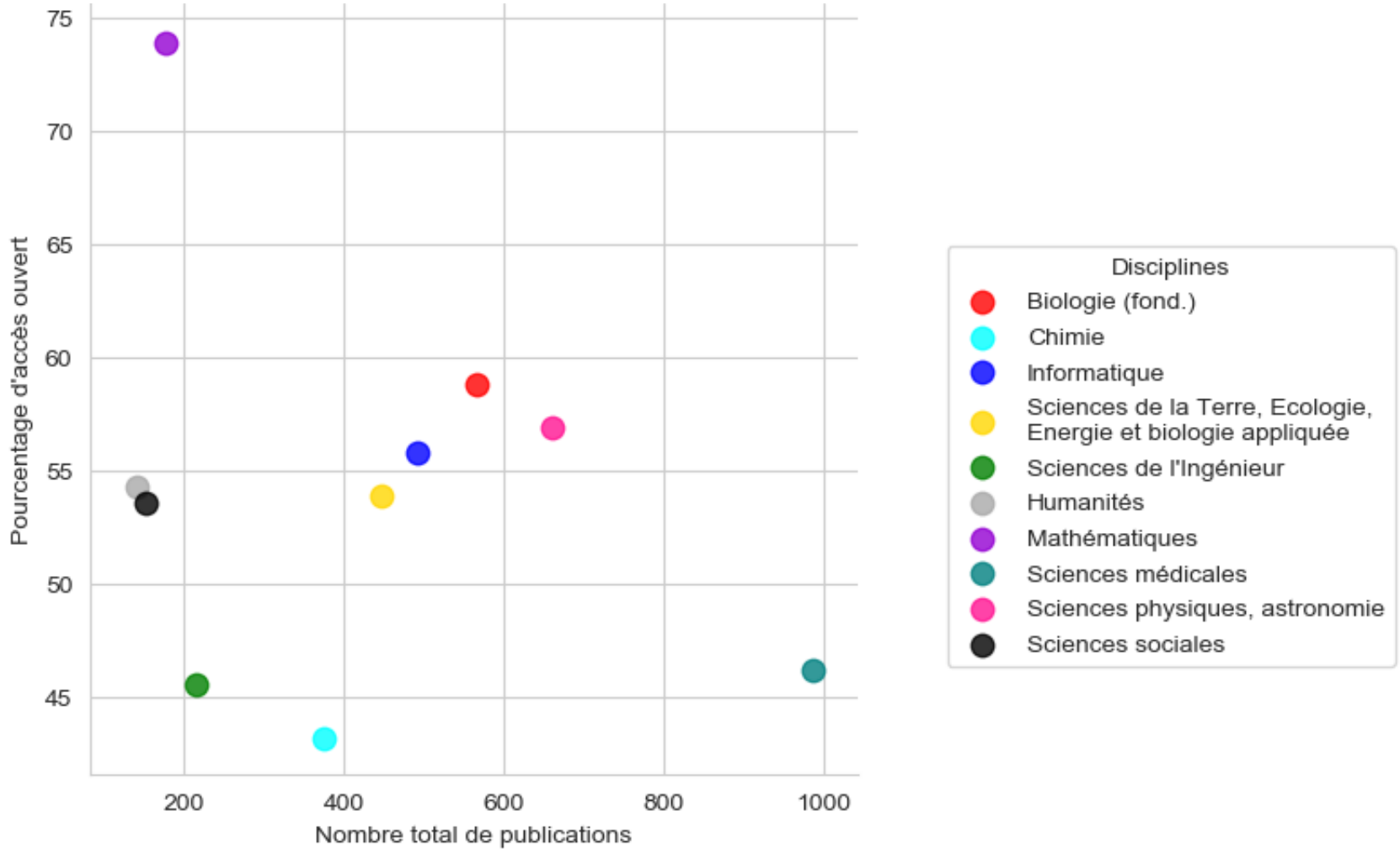
The open access rate by discipline is not correlated with the volume of publications



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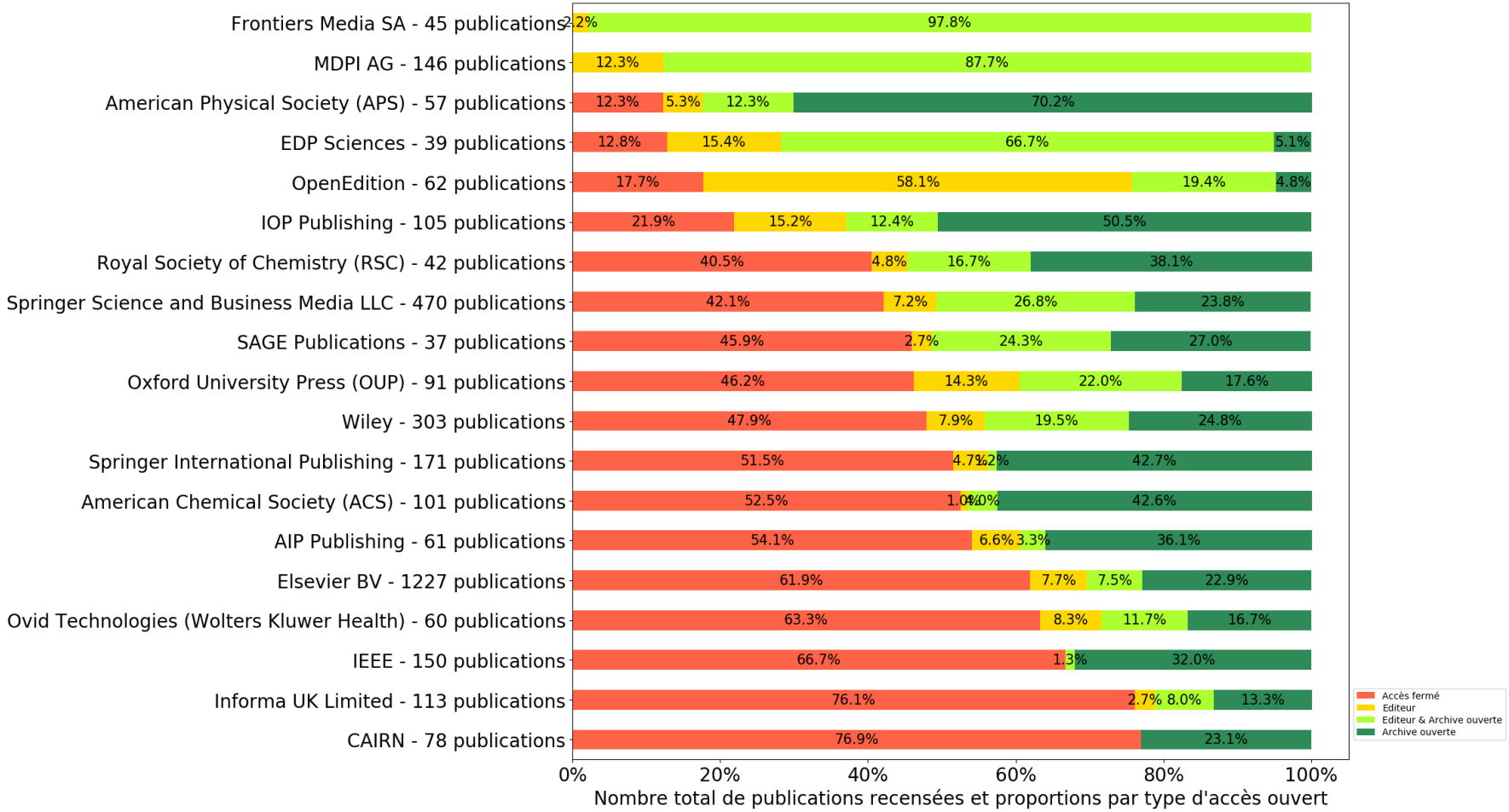
Open access to publications by publisher/platform in 2019

Publishers favored by researchers at the University of Lorraine



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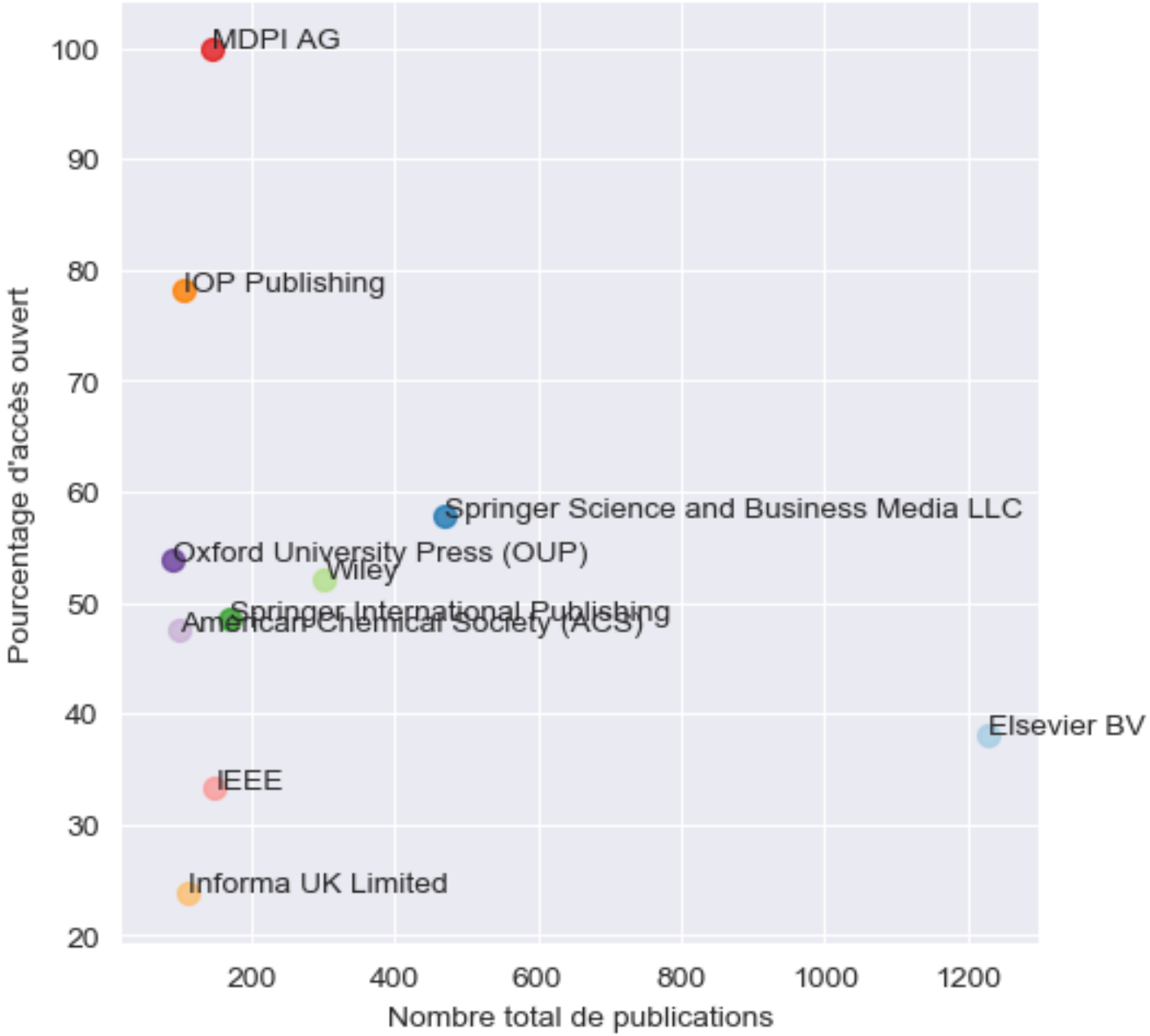
Over-representation of certain publishers



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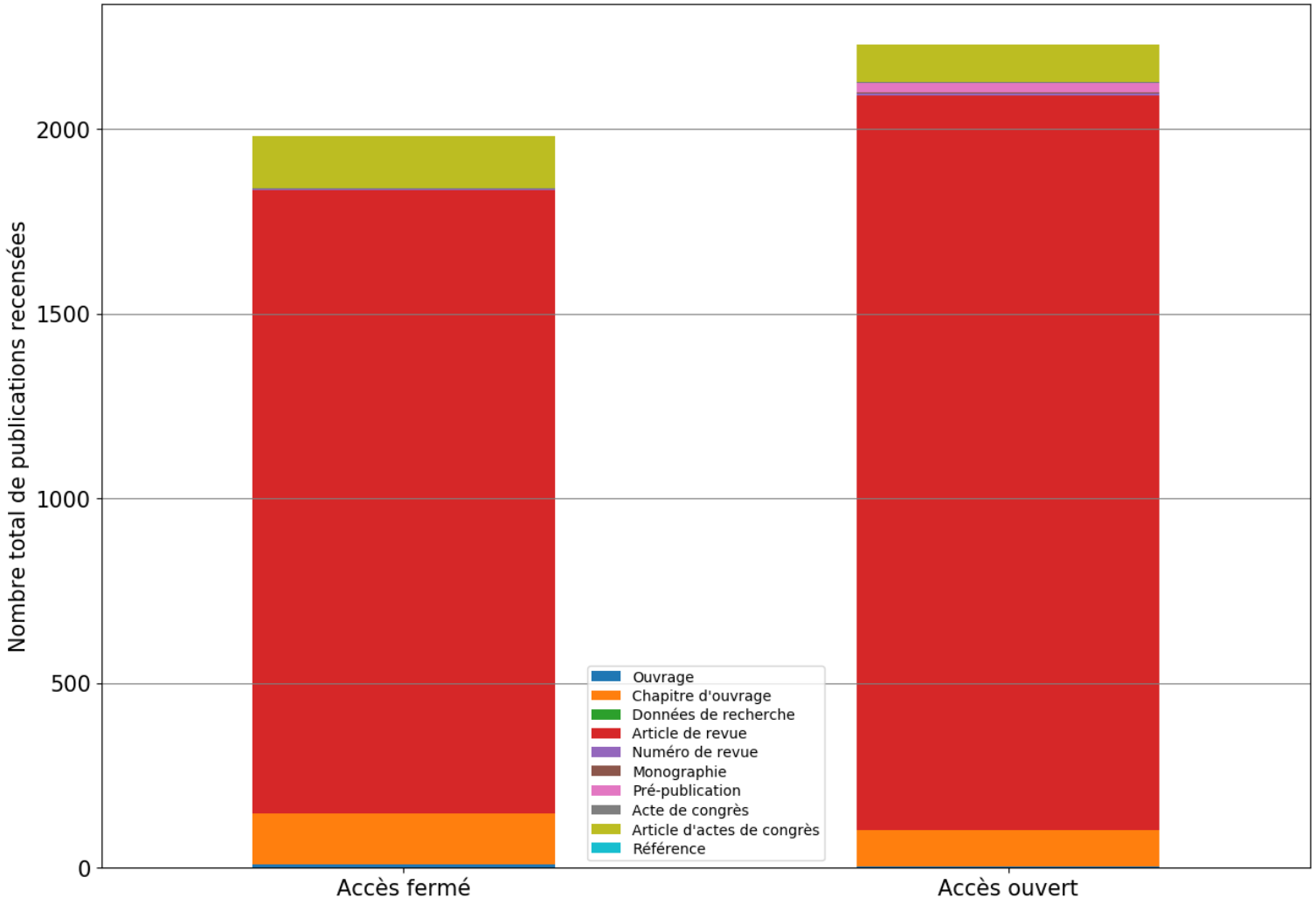
Open access to publications by type of document in 2019

A strong domination of the journal article within the listed publications



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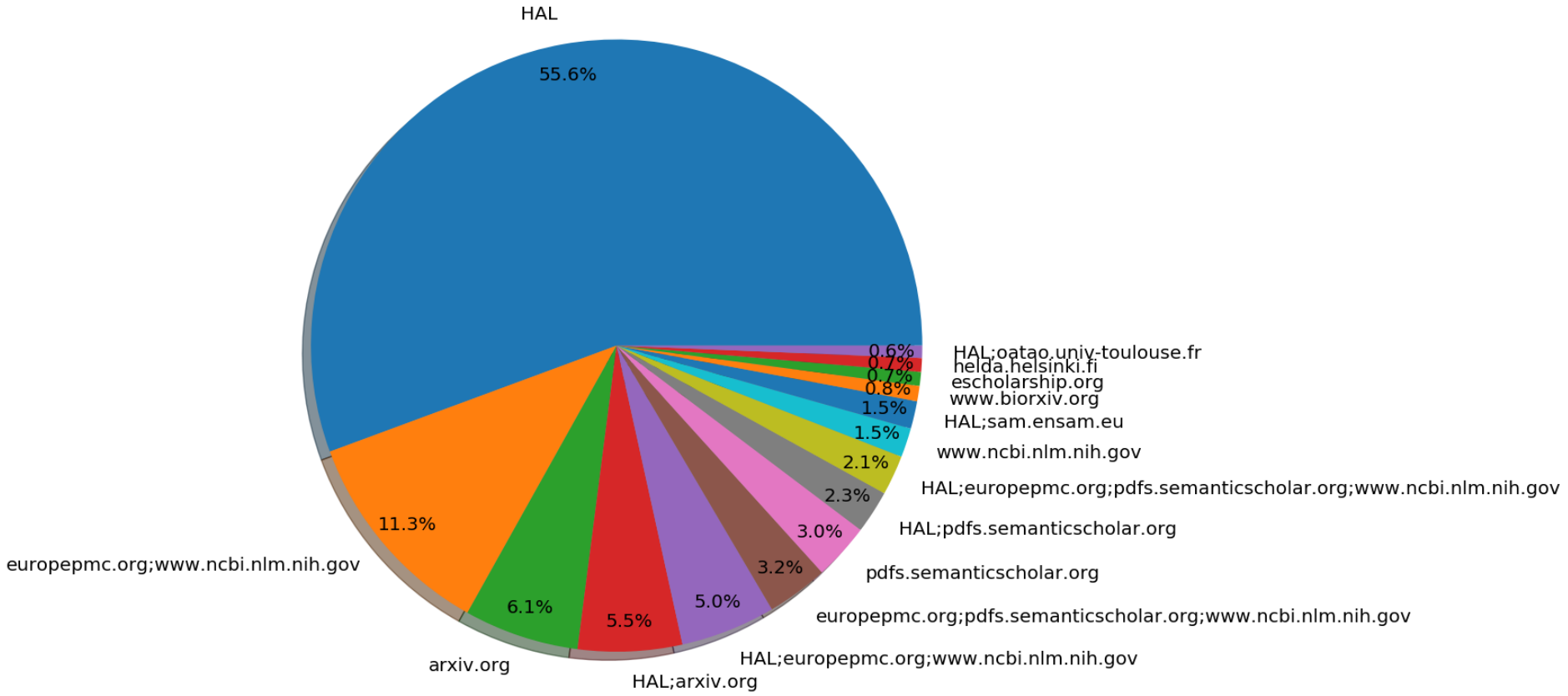
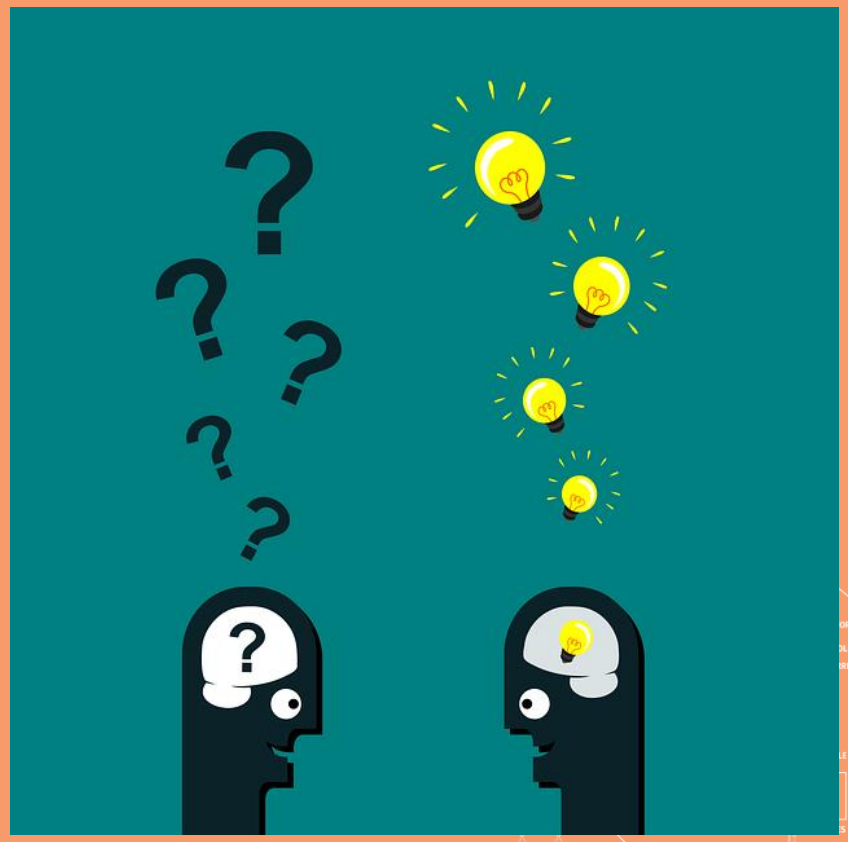
The self-archiving platforms favored by researchers at the University of Lorraine



- Some warning points: only publications with a DOI can be taken into account, the HSS are under-represented in the databases

- But the National Monitor has the same biases : the University of Lorraine can therefore be situated

- To reuse the Lorraine Monitor, follow the readme file on the dedicated Gitlab page



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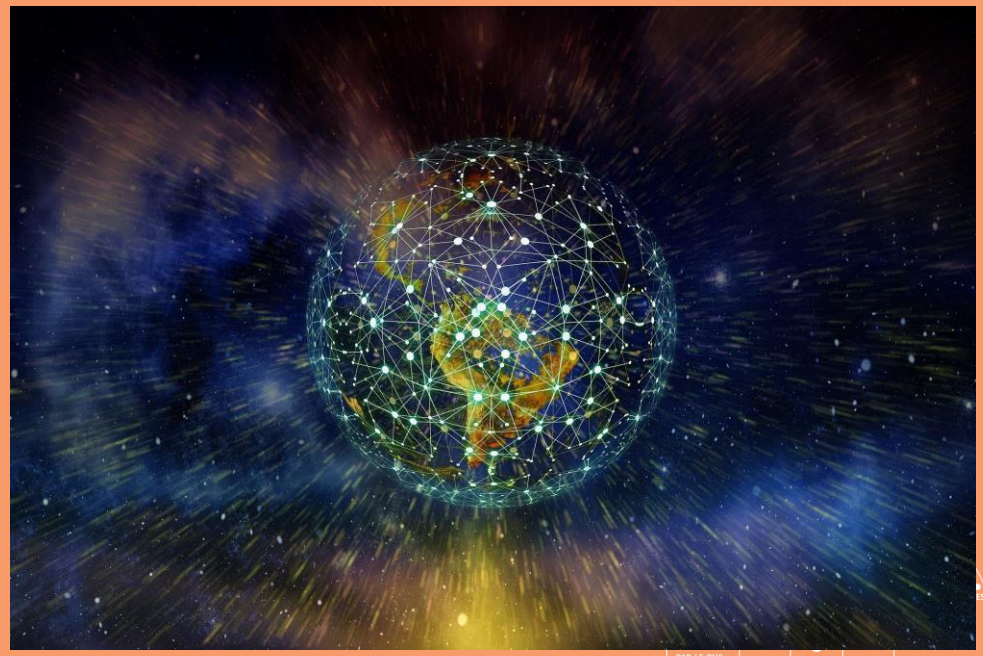
8 universities have already reused the code :

- Evry
- Paris Saclay
- Versailles-Saint-Quentin-en-Yvelines
- Strasbourg
- Rennes-1
- Brest
- CentraleSupélec
- Lyon 1



The code is usable outside France!

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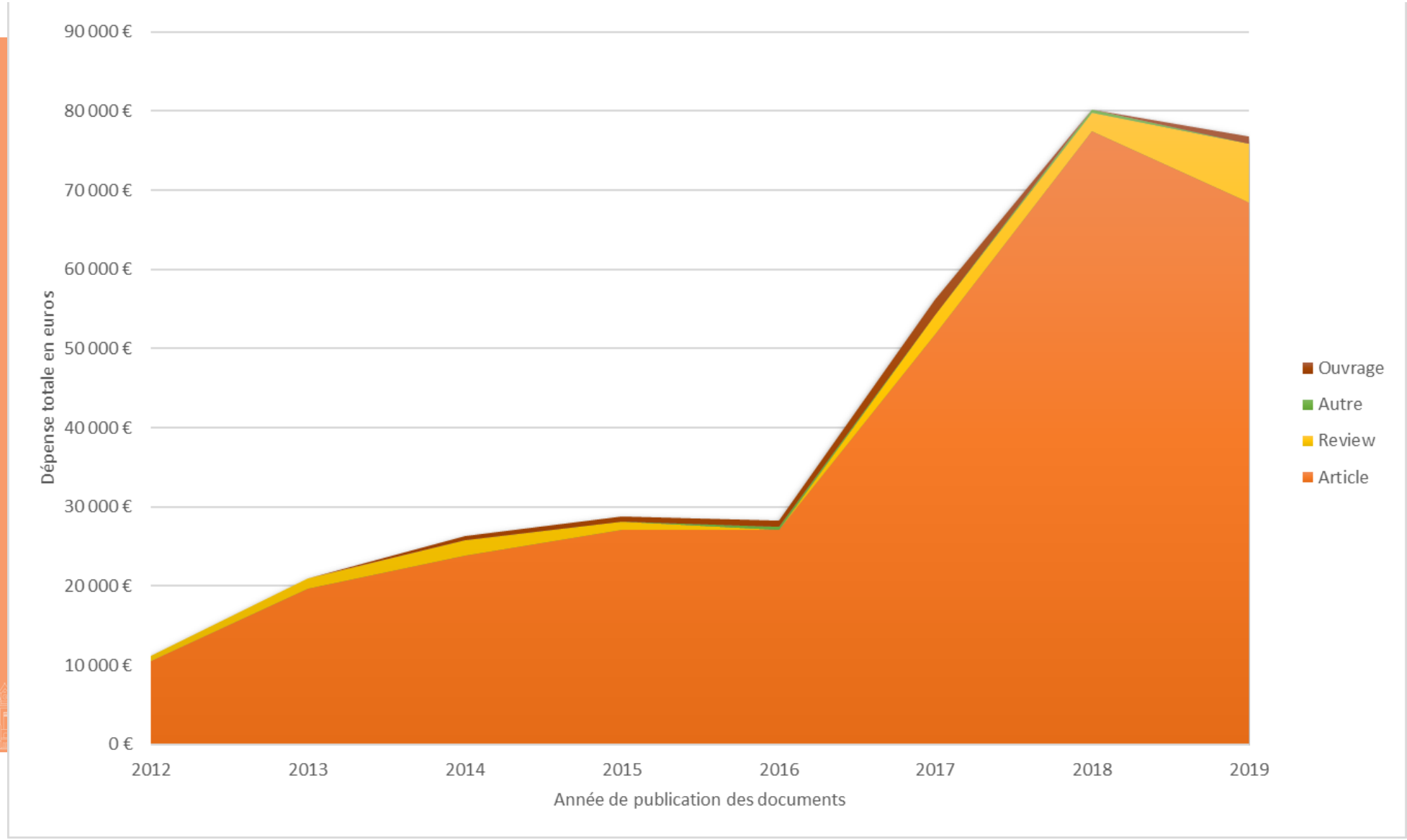
Volume of real APC expenses by year and type of publication



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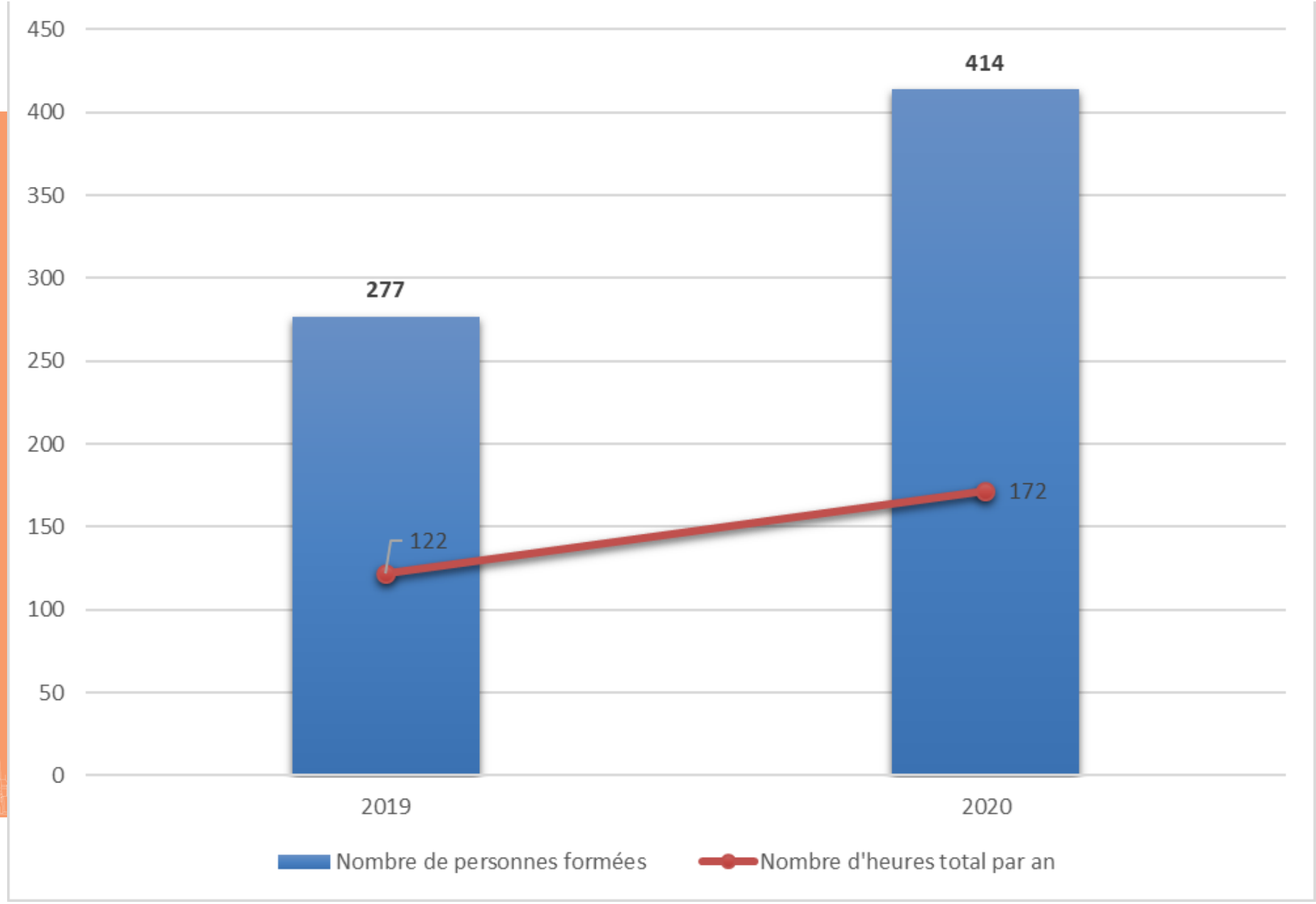
HAL training for researchers



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- The continuous increase in the rate of open access to publications is the product of a constant effort that must be maintained
- Some disciplines could be the object of a particular attention
- The publishers with whom our researchers operate are consistent with a worldwide trend of editorial concentration
- Non-journal publications must be more widely referenced, through the systematic use of a DOI

Thank you for your attention!

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