Introduction:

What is Open Science?

Open Science track

The Open Science track

- Five themes to explore different aspects of open science.
- Different modules at different levels, from theoretical introduction to practical application, so you can build your course according to your needs and the evolution of your doctoral project.

Find out more (French only) :
https://bu.univ-lille.fr/chercheurs-doctorants/doctorants/formations-doctorales

OPEN SCIENCE TRACK (2024 – 2025)

Sessions offered in English

OPEN SCIENCE: GENERAL AND LEGAL ASPECTS

→ Introduction – What is open science?
→ Open science: introduction and funding of research
→ Open science: the legal framework. Authors' rights and licences

WRITING AND DISSEMINATING YOUR THESIS

→ Retrieving and monitoring scientific information and literature
→ Zotero
→ Depositing and disseminating your thesis

PUBLISHING AND DISSEMINATING YOUR WORK

→ Introduction – Disseminating scientific work: publishing and other forms of scientific communication
→ Publishing and scientific integrity
→ How to publish in open access?
→ Open archives: finding out about the platforms and depositing your work

IMPROVING YOUR RESEARCH VISIBILITY

→ Introduction – Increasing your work's visibility: why and how?
→ Using researcher identifiers to publish and disseminate your work
→ Constructing your digital identity as an early-career researcher
→ Value and limits of bibliometrics

DATA, SOURCE CODE AND SOFTWARE

→ Introduction – Understanding the ecosystem of data, source code and software
→ How to manage your research data: best practices and advice
→ Managing your data: OpenRefine
→ Reusing data: searching and citing
→ Managing, preserving, and disseminating your source code and software

Calendar 2024-2025

Today’s programme

- General issues: definitions and advantages of open science
- Environment: actors and open science policies
- Focus: open access and research data
- Let’s dig a bit further: research integrity and research assessment

General issues: definitions and advantages of open science

Definitions

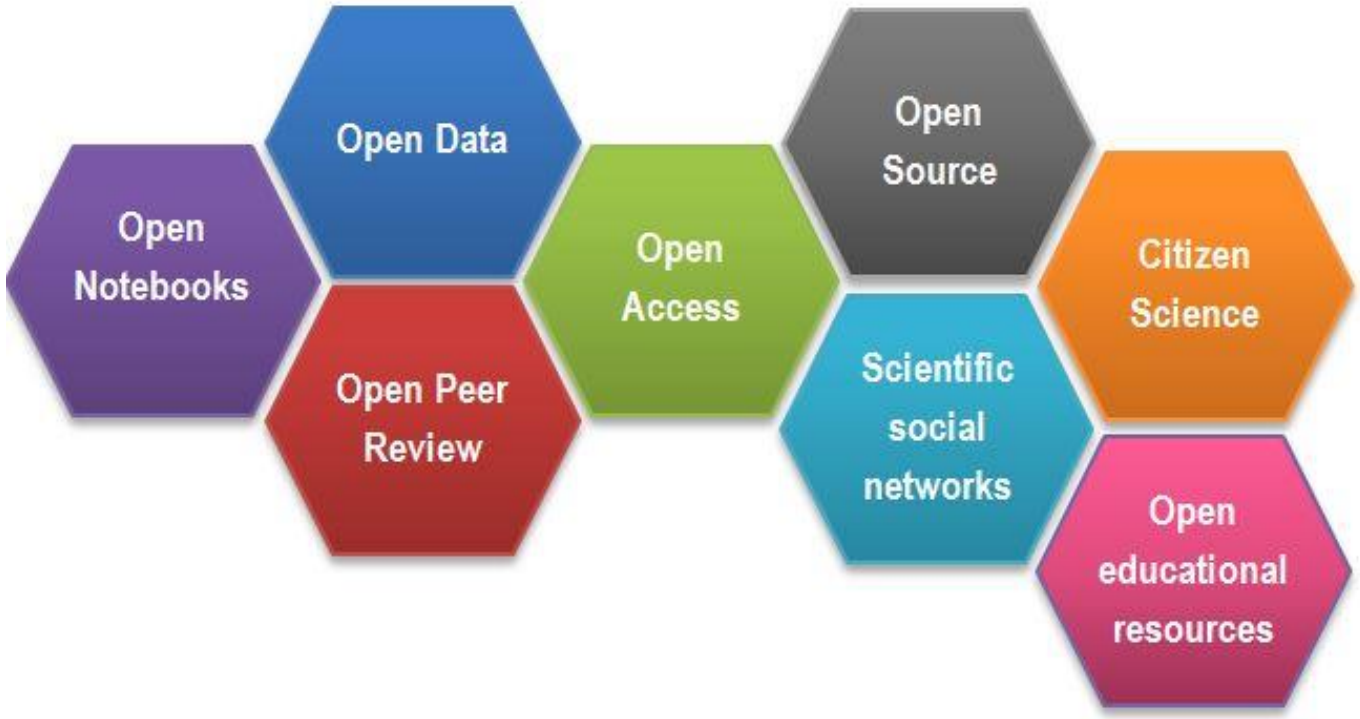
What is open science?

« La science ouverte est la diffusion sans entrave des résultats, des méthodes et des produits de la recherche scientifique. Elle s'appuie sur l'opportunité que représente la mutation numérique pour développer l'accès ouvert aux publications et – autant que possible – aux données, aux codes sources et aux méthodes de la recherche. »

→Dissemination without barrier or impediment of the results, methods and products of scientific research

Website Ouvrir la Science (MESR) https://www.ouvrirlascience.fr/initiez-vous-a-la-science-ouverte/ [Visited on 11/12/2024]

What is open science?



Website Foster Open Science : https://www.fosteropenscience.eu/content/what-open-science-introduction [Visited on 31/01/2024]

What is open science?

- To sum up
  - A new way to advance science and research
  - Based on openness and transparency
  - Focusing on sharing and cooperating
  - And considering the results of public research as a common good

→ Goal: establishing a culture of open science

General issues: definitions and advantages of open science

Advantages

Why practice open science?

- **ACCESSIBILITY AND TRANSPARENCY** : Guaranteeing free and open access to the scientific results and data, especially in case of public funding. Contributing to strengthening the relationship between science and society and the credibility of research, internal and external

- **RESEARCH INTEGRITY** : Guaranteeing the honest character and reproductibility of research, strengthening cooperations by creating more opportunities

- **CONTINUITY AND DURABILITY** : Guaranteeing continuity of files and/or data and access to them (HAL: archiving for 30 years by Cines)

- **IMPACT** : Increasing the impact of one's works thanks to a better referencing and a higher citation rate

- **VISIBILITY** : Sharing and making one's works much more visible

- **PROTECTION** : Having legal protection for one's works, being widely known as an author and avoiding plagiarism

Environment: actors and open science policies

Actors for open science

- **Researchers**, authors and reviewers, members of committees…
- Research **funders** and **political actors**
- **Publishers**
- Open access **platforms** (open access repositories, open archives…)
- **Research support staff**
- **Society** at large

…

Open science policies

National policies

Loi pour une République numérique / Act for a Digital Republic 2016

1er Plan national pour la science ouverte / First National Plan for Open Science 2018-2021

→ Increase the percentage of open access to French publications

→ French Open Science Monitor (and local monitors afterwards)

2eme Plan national pour la science ouverte / Second National Plan for Open Science 2021-2024

→ Generalising open access to publications

→ Structuring, sharing and opening up research data

→ Opening up and promoting source code produced by research

→ Transforming practices to make open science the default principle

100% of French publications in open access by 2030 (goal of the loi de programmation de la recherche / research programming act)

Open science policies

Research funders' policies

ANR's open science commitments and European open science strategy in Horizon Europe

→ Publication / self-archiving in open access of the funded publication without embargo

→ Production of a Data Management Plan (DMP)

→ Incentive to share research data, source code and sofwares under an appropriate licence

Plan S

→ Initiative of the cOAlition S (group of European research funding agencies including ANR)

→ Announced in 2018, reviewed since

→ Full and immediate open access to funded publications

Open science policies

Local policies

→ UPHF has a Plan Science Ouverte (Open Science Plan) and a HAL portal

→ Mandatory referencing of the publications of the university on HAL

→ Strong encouragement to upload a document (financial bonus considered)

→ Strengthened by an **institutional mandate** for systematic upload on HAL (voted in October and December 2023)

→ ULille has a Roadmap for open science (available in English) and an institutional repository, LillOA (connected to HAL)

→ Definitions and local context

→ Policy organised around 5 pillars

Focus

Open Access

Focus: what is open access?

Definition

→ Major part of the open science ecosystem

→ Dissemination of scientific publications, without cost or log-in

→ Several paths

Green open access: open access by the author = self-archiving / upload on an open archive

Gold open access: open access by the publisher = publication in open access on the publisher's platform with a specific contract

Diamond open access: membership / institutional financial support to an open access publisher

Focus: what is open access?

Gold Open Access

Find a journal with open access contracts : Directory of Open Access Journals : https://doaj.org/

Get information about the publisher’s dissemination policy (embargo, versions…)

Be careful with possible processing charges

Be careful with predatory publishers

→ Think about how to combine green and gold

Focus: what is open access?

Gold open access: do not trust the impostors! Predatory publishers

Warning: no connection with open access!

They use arguments about wide dissemination and cost-free services

They write to potential authors directly

There is no peer-reviewing or scientific work

They will usually be unforeseen costs and delays, sometimes no publication at all

They give the illusion of a serious platform

Always enquire about them! Find online information or ask your peers and university libraries

Focus: what is open access?

Gold open access: do not trust the impostors! Predatory publishers

De: "Christine Zialor" <c.zialor@editions-ue.com>
À: "Mélissa Defond" <Melissa.Defond@uphf.fr>
Envoyé: Mercredi 20 Novembre 2019 04:09:17
Objet: Au sujet de vos recherches, Mme. Mélissa Defond

Chère Mélissa Defond,

Votre recherche a attiré mon attention.

Le groupe Omniscriptum serait intéressé à le publier.

Nous sommes spécialisés dans la publication des écrits scientifiques. Nos services sont sans frais. Cela implique une distribution mondiale et une conservation intégrale du droit d'auteur.

Souhaiteriez-vous recevoir plus d'information?

Je reste donc dans l'attente de votre manuscrit.

Meilleures salutations,

Cordialement,
Christine Zialor
Email: c.zialor@editions-ue.com
Lectorat

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Focus: what is open access?

Gold open access: do not trust the impostors! Predatory publishers

De: "Christine Zialor" <c.zialor@editions-ue.com>
À: "Mélissa Defond" <Melissa.Defond@uphf.fr>
Envoyé: Jeudi 28 Novembre 2019 00:15:20
Objet: Dans l'attente de votre réponse, Mme Mélissa Defond

Madame Mélissa Defond,

Avez-vous reçu ma proposition de publication gratuite?

Au cas où vous auriez besoin d'informations supplémentaires, voici un aperçu de nos auteurs et de nos services:
www.omniscriptum.com/wp-content/uploads/brochure-EUE-FR.pdf

Merci de revenir vers moi. Cela m'attristerait de ne pas voir votre travail publié chez nous. Je vous prie de prendre le temps de reconsidérer notre offre avant de la refuser trop hâtivement.

Je vous remercie d'avance.

Cordialement,
Christine Zialor
Email: c.zialor@editions-ue.com
Lectorat

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Focus: what is open access?

Gold open access: be careful with abuses and excesses! Fees and hybrid open access journals

Many publishers moved from a reader-payer model (institutional subscriptions) to a author-payer model (APC, *article processing charges*)

Be careful with unreasonable prices (4 digits…)

Enquire about it in your lab (policy in place?)

Prioritise a traditional publication with a complementary self-archiving to avoid these costs

Hybrid open access journals: author fees and subscriptions (d*ouble-dipping*). The author pays to release access to a specific publication, otherwise part of a subscription model. Avoid this cost by using an open archive deposit instead

Focus: what is open access?

Green open access

Self-archiving in an open archive / institutional repository

→ National like HAL : https://hal.archives-ouvertes.fr/

→ Disciplinary like ArXiv : https://arxiv.org/

→ Institutional like LillOA and HAL-UPHF (subpart of the national HAL)

→ Look them up! There are many online, according to countries and geographical areas, research fields and pratices... OpenDOAR lists them

Possibilities offered by the Loi pour une République numérique

→ Self-archiving of the postprint / accepted author manuscript with the agreement of all authors and without profit or commercial use involved

→ For periodical scientific publications (at least once a year) with at least 50% of public funding

→ With a period of embargo (STM 6 months and SSH 12 months)

→ Is superior to a publisher's contract, even foreign

→ On academic social media, link to an open archive (without any document!)

Focus

Research Data

Focus: research data

Most widely-used definition, OECD (2007) (Principles and Guidelines for Access to Research Data from Public Funding [Visited on 11/12/2024]) **:**

"[…] factual records (numerical scores, textual records, images and sounds) used as primary sources for scientific research, and that are commonly accepted in the scientific community as necessary to validate research findings. A research data set constitutes a systematic, partial representation of the subject being investigated."

Focus: research data

Double issue: proper research data management (organisation, storing, naming…) and research data opening / open data

Importance of sharing and disseminating research data to guarantee the reproductibility of research thanks to the FAIR principles:

→ Findable: easy to find thanks to descriptions and persistent identifiers

→ Accessible: easy to find thanks to open protocols and access to metadata

→ Interoperable: easy to share thanks to description standards and open format

→ Reusable: easy to reuse thanks to licences, standards and open formats

Let’s dig a bit further

Research Integrity and Research Assessment

Research integrity

Definition

« l'ensemble des règles et des valeurs qui doivent régir l'activité de recherche, pour en garantir le caractère honnête et scientifiquement rigoureux » Lettre circulaire de 2017 [Visited on 11/12/2024]

→ The rules and values presiding over research to make it honest and scientifically rigorous

Methodological dimension: good research practices

Breaches of research integrity: frauds and questionable research practices

Connected to open science: mutual improvement

Open science contributes to research reproductibility, which strengthens integrity

The more openness and transparency, the more honesty

→ People sensitive to one are generally sensitive to the other

Research Assessment

Evolutions

Traditional quantitative approach (h-index, impact factor…) currently questioned

HCERES evaluations of research units and institutions: open science and research integrity criteria

Production of an extraction tool by HCERES to use data from HAL for publications lists

CNRS researchers' annual activity reports (CRAC and RIBAC) only use data from HAL

Recent European initiative: CoARA

Plea for a more qualitative research assessment

ULille and UPHF signed it

Open science and qualitative assessment connected

Conclusion

To go further

Other training sessions

2 other modules in this introductory theme: legal framework and research funding

All 5 themes focus on open science

Trainings about open access, research data, research integrity

Contacts

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References

Passport for Open Science, a practical guide for PhD students: https://www.ouvrirlascience.fr/passport-for-open-science-a-practical-guide-for-phd-students/

Website Ouvrir la science (MESR): https://www.ouvrirlascience.fr/accueil/

Website Science ouverte France by Couperin: https://scienceouverte.couperin.org/

HAL-UPHF Portal: https://uphf.hal.science/

LillOA: https://lilloa.univ-lille.fr/

Thank you for participating in this session!

Mélissa DEFOND

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