

Module IV:

Data classification and storage selection

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Agenda

- What types of data do you have?
- Data categories and their colour-coding
- Data storage based on data category
- Q&A session



Types of research data

- Qualitative (descriptive) or Quantitative (numbers)?
- Observational, Experimental, Computational or Records?
- Personal data or not?
 - General (non-sensitive) personal data:
 - name, address, phone number, e-mail; exam grades, case documents; log-in activity, e-mail communication; audio- and video-recordings, images
 - Sensitive personal data:
 - health information; biometric or genetic information; ethnic or racial origin; political, philosophical or religious perceptions and beliefs; sexual orientation, sexual relationships; trade-union membership

On ownership

- All UiO information shall have an unambiguous and identifiable owner.
- Anyone should easily be able to find out who is responsible for keeping the information updated, maintained and correctly labeled.
- The «information owner» is responsible for the assessment used to place the information in its given category.
- In those cases where an owner cannot be identified, the University Director is responsible for the information.

On ownership – How to decide which class to use?

- **Always put the information in a sufficiently safe class.**
- If you are not sure whether to your information is red or yellow, choose red.

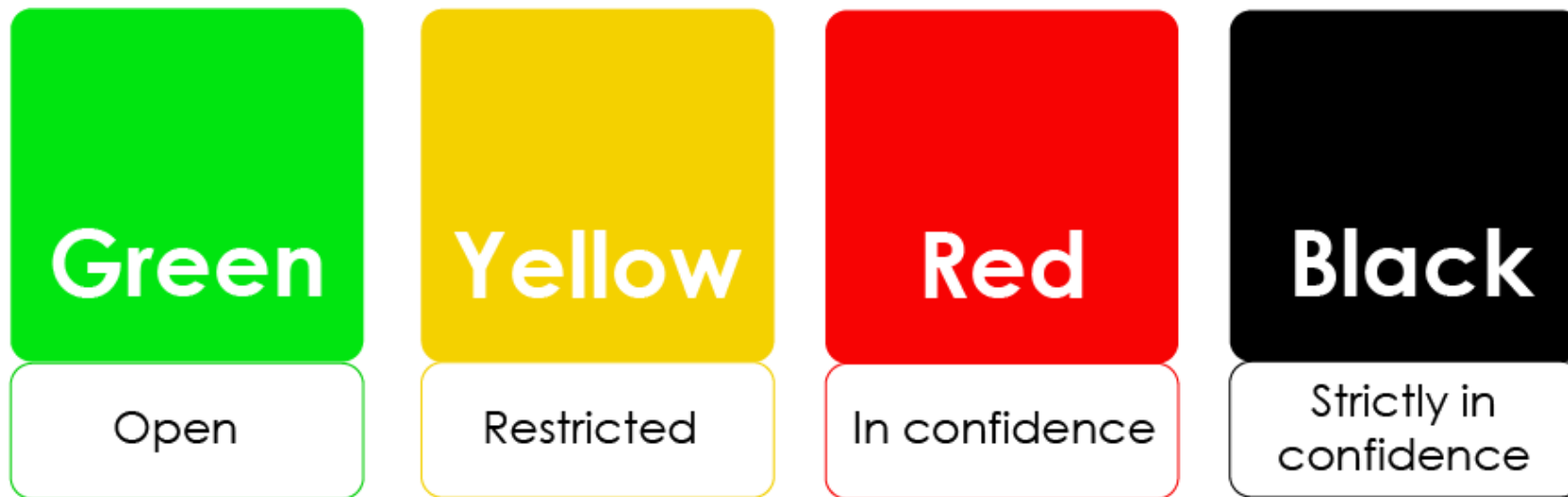




DATA CLASSIFICATION

Classifying your data

- Data classification at UiO is based on how harmful for public interest, the university or individuals it would be if the data becomes exposed



<https://www.uio.no/english/services/it/security/isis/data-classes.html>

What is **green** data

- **Open or freely available** to the general public
- This class is used when it **does not cause any harm** to the institution if the information becomes known to unauthorized persons.
 - Any research that is published openly. Information that is not public, needs to be removed first.
 - Teaching material that is not subject to copyright and does not need any protection
 - Completely anonymous data
 - Statistics



What is **yellow** data?



- **Restricted** - basically information which is not open for everyone
- This class is used when it **could cause limited harm** to the institution if the information becomes known to unauthorized persons.
 - Documents that you don't want everyone else to read
 - De-identified data where the key is locked away and stored safely away from the data
 - Data sets containing minor amounts of non-sensitive personal data
 - E-mail attachments that don't contain information that needs protection
 - Unpublished research material
 - Texts and pictures under copyright
 - Examination answers and grades

What is **red** data?

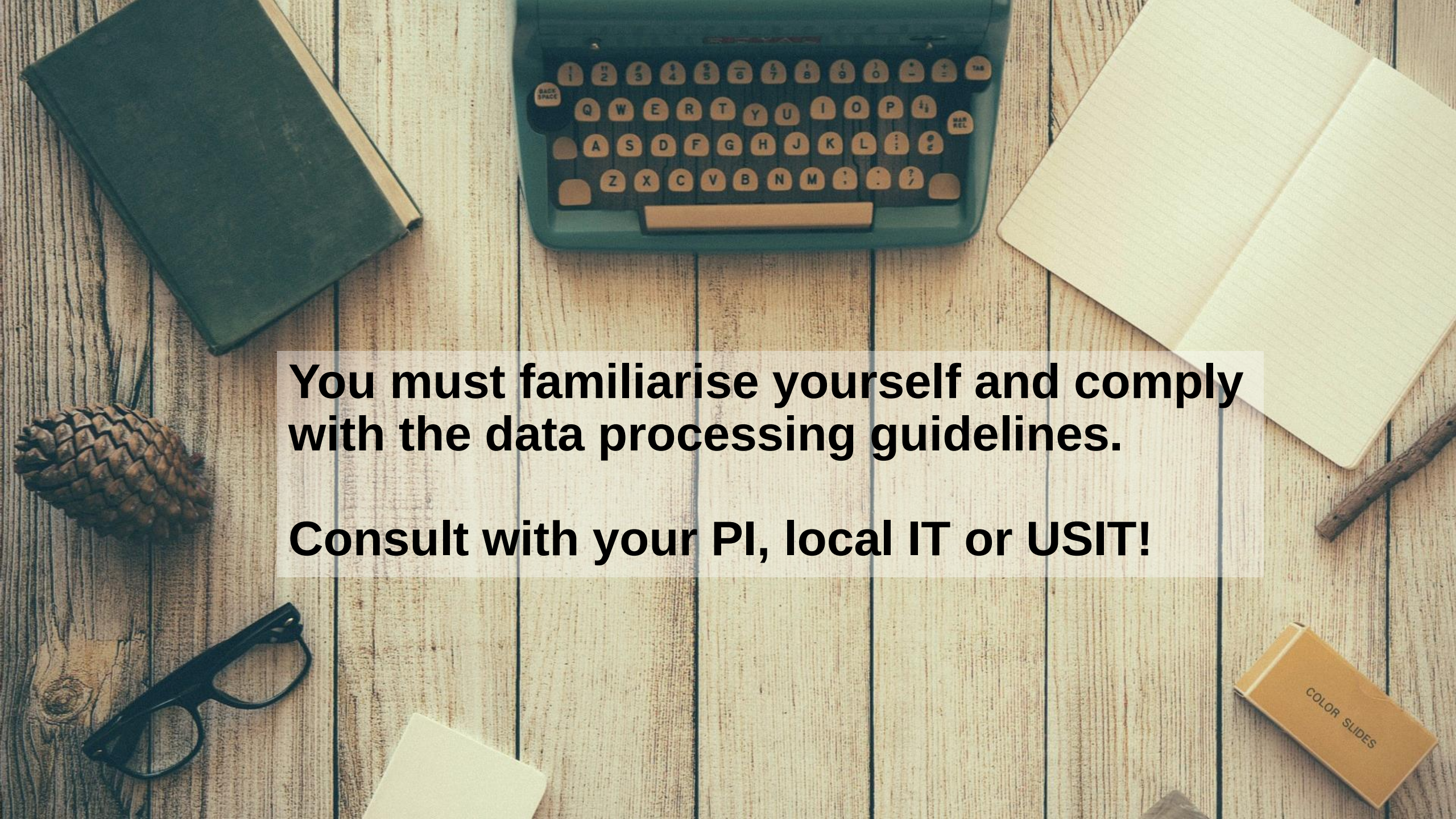
- **In confidence** - the university is obliged to protect by law, agreements and other regulations
- This class is used if it **could cause harm** to public interests, the university or individuals if the information becomes known to unauthorized persons.
 - De-identified data where the key is available and stored with the data
 - Special categories of personal data
 - Personnel files
 - Information relating to e.g. safety systems in buildings or IT systems
 - Health related data



What is **black** data?



- **Strictly in confidence** - special circumstances makes it necessary to protect the information even more
- This class is used if it **could cause considerable harm** to public interests, the university or individuals if the information becomes known to unauthorized persons.
 - Research data that requires extra protection
 - Large quantities of sensitive personal data
 - Large quantities of health related data
 - Research data that is of great financial or commercial value



You must familiarise yourself and comply with the data processing guidelines.

Consult with your PI, local IT or USIT!

A photograph of a large server room with rows of server racks. The racks are filled with server units, and the perspective is looking down a long aisle. The text "STORAGE SELECTION" is overlaid in the center.

STORAGE SELECTION

Where can you store the different types of data?

Data storage guide:

<https://www.uio.no/english/services/it/security/isis/storage-guide.html>



Where can you store the different types of data?

- **Green data:**
 - anywhere you want, but ideally **not only** on your private laptop (very vulnerable!)



Where can you store the different types of data?

- **Yellow data:**

- Encrypted memory stick / external hard drive
- Encrypted laptop maintained by UiO
- UiO cloud solutions (UiO OneDrive, UiO G-Suite, ...)
- UiO storage hotel («lagringshotell»)
- UiO personal researcher storage
- UiO e-mail; UiO Teams; UiO Zoom; UiO Nettskjema; UiO Canvas, UiO Vortex, UiO Wiki...
- **Not** your private laptop, unless you comply with the [guidelines for use of private computer](#)



UiO commercial cloud solutions

- Microsoft 365 + OneDrive

<https://www.uio.no/english/services/it/store-collaborate/ms365/>



- Google Workspace

<https://www.uio.no/english/services/it/store-collaborate/gsuite/>



Where can you store the different types of data?

- **Red data:**

- Fully encrypted disc, memory stick or external harddrive
- Services for sensitive data – TSD
- Educloud Research
- UiO Storage Hotel*
- UiO Personal researcher storage*
- UiO Vortex*



*see Storage guide for details!

Source: <https://www.uio.no/english/services/it/security/isis/storage-guide.html>

Where can you store the different types of data?

- **Black data:**
Services for sensitive data – **TSD**
 - «Snapshot» backup for last 7 days



Educloud Research

= «TDS light»

- New project-oriented self-service platform that gives easy and fast access to:
 - A work environment for research projects that have cross institution and cross border users
 - Storage that is available from anywhere, from any device and shared between project users and project platforms
 - A low threshold HPC system that offers batch job submission and interactive nodes, and that has access to the same storage as the Windows and Linux resources available to the project
- For **green**, **yellow** and **red** data
- Free for UiO researchers at least until January 2023
- More information at: <https://www.uio.no/english/services/it/research/platforms/edu-research/>
<https://www.uio.no/english/services/it/research/platforms/edu-research/more/>



Sign up - Educloud research

Choose one option



Request a new project

Only for project administrators and currently only available for users with a Norwegian electronic ID.

Go to Nettskjema



Apply for access to a project

Currently only available for users with a Norwegian electronic ID.

Log in (ID-porten)

Back

Skjemaet lagrer personinformasjon.

Svarene lagres i Tjenester for sensitive data (TSD). [Les mer](#) ▼

Registrering av nytt prosjekt i Educloud Research

0 %



Obligatoriske felter er merket med stjerne *

Informasjon om deg som prosjektadministrator

Du som fyller ut dette er enten Principal Investigator (PI) i selve prosjektet eller har fått fullmakt fra PI. Oppgavene som prosjektadministrator skal utføre når prosjektet er registrert i EduCloud Research er innmelding og utmelding av brukere i prosjektet, endre rettigheter, utvide ytelser mm. Dersom du fyller ut dette skjemaet med fullmakt fra PI må du bruke din egen BankID



Sign in

Username

Password

[Forgot your password?](#)

One time code

[Need a new one time code?](#)

Sign in

Do you not have an account yet?

Get started with Educloud



 Projects •

Support

 Settings

 Help

Projects

1 project

Name		Status	
ec32		Active	Select project

 Projects

Project

 Users

 Fox users

 Windows users

 Desktop •

Support

 Settings

 Help

Desktop
Connect to your virtual desktop

Available desktops

 Educcloud VMware Connect



VMware Horizon

You can connect to your desktop and applications by using the VMware Horizon Client or through the browser.

The VMware Horizon Client offers better performance and features.



Install VMware
Horizon Client



VMware Horizon
HTML Access

☐ Check here to skip this screen and always use HTML Access.

To see the full list of VMware Horizon Clients, [click here](#).

For help with VMware Horizon, [click here](#).





VMware Horizon

Enter your Sentry user name and One-Time Code

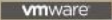
Login

Cancel

[Help with VMware Horizon](#)

[Privacy Policy](#)

[Download the Horizon Client for Windows \(x64\)](#)





🔍 Search



EC Windows
Desktop



- Recycle Bin
- LibreOffice 7.2
- Zotero
- Google Chrome
- Microsoft Edge
- GitHub Desktop



File Explorer

File Home Share View

Quick access

Quick access

- Desktop
- Downloads
- Documents
- Pictures
- This PC
- Network

Frequent folders (4)

- Desktop This PC
- Downloads This PC
- Documents This PC
- Pictures This PC

Recent files (0)

After you've opened some files, we'll show the most recent ones here.

4 items

Where can you find an overview of all cloud services at UiO that are evaluated or under consideration?

https://www.uio.no/tjenester/it/ny-tjeneste/vurderte_skytjenester.html
(in Norwegian)



Backup



- Use safe storage solutions, where data/files are backed up
- Always keep a copy of your raw data material safely hidden away (like a folder on storage hotel that you never edit)
- Saving files only on your own computer is **not** safe!
- A memory stick or an external hard drive is **not** safe!
- How much extra work would take to recreate all your data or your work?

Upcoming sessions

Copyright and licensing

Nov. 14, 1:00 PM, Zoom

Sharing and archiving research data

Nov. 16, 9:00 AM, Zoom

Finding and reusing research data

Nov. 18, 9:00 AM, Zoom

Research data management

Welcome to UiO's data management pages maintained by the research data group at [Digital Scholarship Center](#).

[Data management plans \(DMPs\)](#) >

[Data classification and storage](#) >

[Data organization](#) >

[Data documentation and metadata](#) >

[Data sharing and publishing](#) >

[Finding and reusing data](#) >

Glossary

An overview of [often used terms](#) in research data management.

Laws and ethics

[Information on privacy and data protection at UiO](#)

[Intellectual property rights at UiO](#)

[National guidelines from Research Ethics Committees](#)

Courses and support

[Currently offered courses](#)

Need advice? Feel free to [book an individual appointment](#) or contact us at **research-data@uio.no**

Are you a data manager? Join our [data managers network!](#)

Digital Scholarship Centre

At the Digital Scholarship Centre (DSC) you get guidance on how you can make the best possible use of digital tools and methods in your research and communication activities.

Open Access →

Information about open access publishing, publisher agreements, self-archiving, requirements, and guidelines.

Open and reproducible research →

Make your research more transparent and reproducible.

Research Data Management →

Managing your data both during and after a research project.

Text-mining →

Information about digital tools for searching, mining, and analysing textual data.

Systematic search →

Information about systematic literature searching, how to get started, and how to get help.

Visualisation →

Use of visual methods to explore, communicate and understand data.

Carpentry@UiO →

Offers workshops in foundational digital skills such as coding and data management.

Reference management →

Styles, tools, and information on reference management.

Digiforsk blog →

A blog about work and resources at UiO where digital research methods are involved. Posts in both Norwegian and English.

Carpentry: Training on foundational coding and data science skills

At University of Oslo (UiO), Carpentries workshops based on Software Carpentry, Data Carpentry, and Library Carpentry lessons are offered to facilitate sharing and re-using of code and data among graduates and researchers from all faculties and units.

Open and reproducible research

More and more researchers and students across disciplines are implementing open research practices, preregistering their hypotheses, methods, and analysis plans and sharing research materials, data and analysis scripts. This course series will give an introduction to open and reproducible research practices and guides on how to implement them in your own research practice.

OA publishing and research visibility

Keep copyrights to your own work by publishing in Open Access journals. Find out your research impact. The course gives you practical support in publishing process and making your research visible.

Open Science Lunch

Each last Thursday of the month at 12:00 we invite you to join us for a lunch seminar to hear about how to make your research more open. We will discuss research transparency and visibility, open publishing, data sharing, and more!

Upcoming



Time and place: Nov. 24, 2022 12:00 PM–1:00 PM, Hybrid: Georg Sverdrups hus and Zoom [Add to calendar](#)

Open Science Lunch: CRedit your co-authors

Learn about CRedit - a new international standard for transparent assignment of individual research contributions.

<https://www.ub.uio.no/english/courses-events/events/open-science-lunch/>



Journal Clubs

Our mailing list:

<https://sympa.uio.no/uio.no/subscribe/open-science-oslo>

University of Oslo

Welcome

Our journal club is open to both staff and students at UiO across all departments. Everyone is welcome to join us - whether you are an enthusiast, a skeptic, or a cautious explorer. Feel free to get in touch if you are interested to participate or contribute!

Our mission

- provide an informal and friendly platform for discussions about meta scientific topics
- help each other get familiarized with open science practices (e.g., pre-registrations, sharing data, sharing preprints, etc.)
- connect students and researchers from various disciplines who are interested in meta science.

Format

Before each meeting, we read an article on meta scientific topics, which we then discuss during the meeting. At each meeting, a different discussion leader will begin by providing a short overview of the paper and facilitate discussion throughout the meeting. Anyone can propose a possible paper or topic to present if we have not covered it already. Grab a cup of tea (coffee?) and join us! Due to the current pandemic, all sessions will be held online (Zoom) for the time being.

 Universitetet i Oslo

 osf.io/mvx54

Z [collection](#)

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 Timo B. Roettger

 Agata Bochynska



Materials developed as a part of the *Skills development for research data* project:
<https://www.ub.uio.no/english/about/projects/rdm-skills/>

Thank you!

Contact us at:

research-data@uio.no