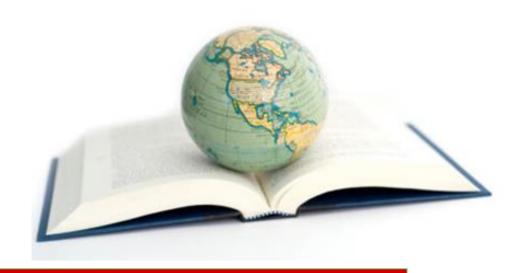
Bibliographic resources and research tools for Industrial Engineering



# A presentation for PhD students

Susanna Valpreda, Sara Meneghin, Marica Milotti Biblioteche di Ingegneria info biblio.inge@unipd.it





## Index





- **Section 1** | **Bibliographic research and databases**
- **Section 2** | **Bibliometrics and bibliometric indicators**
- **Section 3 | Engineering databases**
- **Section 4** | Open Access Padua Research Archive
- **Section 5** | Open Data Research Data Unipd
- **Section 6 | Reference management**

# Workshop materials

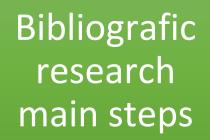


### Workshop slides are available here:

http://biblioingegneriacentrale.cab.unipd.it/usa/laboratori/materiali

# Section 1 | Bibliographic research and databases





- Identify your topic and keywords
- Choose the proper tools (catalogues, databases...)
- Collect and evaluate useful documents (articles, papers, technical reports...)
- Create your bibliography using the correct citation style and citing the source

## What are Bibliographic Databases?



A bibliographic database is a database of bibliographic records, an organized digital collection of references to published literature, including journal and newspaper articles, conference proceedings, reports, government and legal publications, patents, books, etc.

In contrast to library catalogue entries, a large proportion of the bibliographic records in bibliographic databases describe articles, conference papers, etc., rather than complete monographs, and they generally contain very rich subject descriptions in the form of keywords, subject classification

terms, or abstracts.

A bibliographic database may be general in scope or cover a specific academic discipline.

### Why use Bibliographic Databases?



- Bibliographic databases allow you to **use keywords** to search across thousands of different journal titles and conference proceedings at the same time for papers in a specific subject area.
- This saves you a lot of time as you do not have to search through individual publications.
- The papers have been through some form of "quality control" to ensure that the information is more reliable and valid than information you may find by searching the internet (better than Google search!).
  - Bibliographic databases allow you to **create a structured search** by helping you to identify relevant keywords, to combine keywords together and to limit your search.



### Why use Bibliographic Databases?



- Bibliographic databases give you the citation or reference details about the articles you have found so that you can locate the full text.
- Bibliographic databases usually provide links to the abstract or summary of the article so you can evaluate its relevance.
- If the University has an electronic subscription to the journal or conference proceedings, you will have online access to the full text of the paper.
- Bibliographic databases are regularly updated giving you access to the most current research.

### Bibliographic databases



Multidisciplinary
Bibliographic
Databases

Web of Science (Clarivate bibliographic and citation database of peer-reviewed literature)

<u>Scopus</u> (Elsevier bibliographic and citation database of peer-reviewed literature)

#### Bibliographic databases



Engineering Bibliographic Databases Engineering Village (the most comprehensive interdisciplinary engineering database in the world)

<u>IEEE Xplore</u> (full-text electrical engineering, computer science, and electronics bibliographic database)

<u>Business Source Complete</u> (bibliographic database about management, economics, finance, business...)

<u>SpringerMaterials</u> (A comprehensive database covering multiple material classes, property types, and applications)

#### Bibliographic databases



Engineering Bibliographic Databases <u>Reaxys</u> web-based search and retrieval system for chemical compounds, bibliographic data and chemical reactions

<u>Total materia</u> The world's most comprehensive materials database

<u>ASTM Compass</u> includes the access to research reports, journals, special technical publications, manuals/monographs, data series, proceedings, bulletins, materials research and standards

<u>Dieselnet</u> technical and business information related to all types of internal combustion engines, their fuels, emissions, and the technologies required by the clean and efficient engines of the future

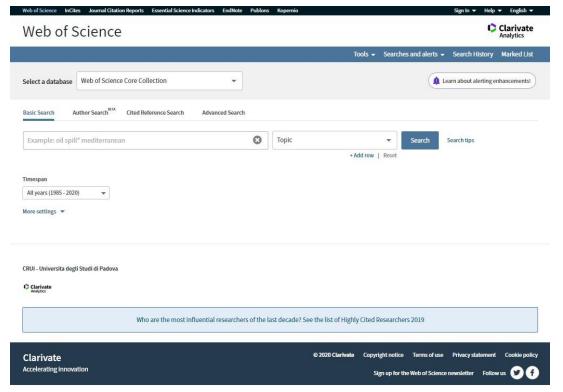
**Bsol** includes all international and European standards that have been adopted as British standards (also ASTM, ISO and IEC standards

## Web of Science (WOS)

**COVERAGE:** multidisciplinary

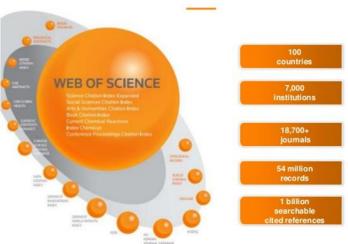
TIME RANGE: 1985-

**DOCUMENT TYPES: articles, proceedings papers** 





#### **WEB OF SCIENCE**



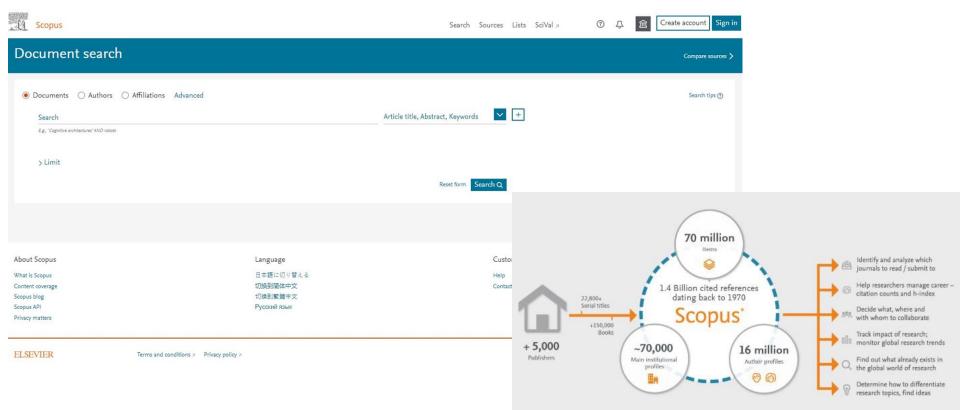
#### Scopus



**COVERAGE:** multidisciplinary

**TIME RANGE: 1970-**

**DOCUMENT TYPES: articles, proceedings papers** 



# Section 2 | Bibliometrics and bibliometric indicators





**BIBLIOMETRICS** is a set of mathematical and statistical methods used to analyze and measure the quantity and quality of books, articles, and other forms of publications.

#### **Bibliometrics**

- identifies the best journals of a specific discipline
- defines the prestige of a specific journal
- determines the impact of published research

#### **Bibliometrics evaluates:**

- scientific journals
- single researchers
- research groups



#### **Bibliometrics indicators**



**Bibliometric indicators** are very important for researchers and organizations, as these measurements are often used in funding decisions and promotions of researchers.

They are becoming increasingly important since published research

results are read and then quoted by other researchers.

- quantity indicators: measure the productivity of a particular researcher (Impact Factor; SNIP, SCImago)
- quality indicators: measure the quality or performance of a researcher's output; corresponds to the so called "peer-review", a review by colleague-scientists (h-index)



#### Impact factor





The **impact factor (IF)** is a measure of the frequency with which the average article in a journal has been cited in a particular year.

It is used to measure the importance or rank of a journal by calculating the times its articles are cited.

#### **How Impact Factor is Calculated?**

The calculation is based on a two-year period and involves dividing the number of times articles were cited by the number of articles that are citable.

The Impact Factor is used to compare different journals within a specific disciplinary field.

The <u>Journal of Citation Report</u> indexes more than 11,000 science and social science journals.

It is important to note that Impact Factor is a journal metric and should not be used to assess individual researchers or institutions.



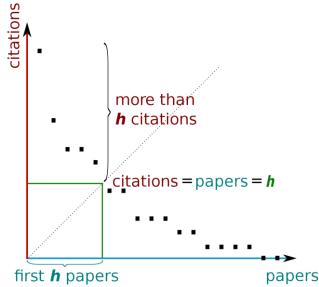
#### H-Index



The **h-index** quantifies an individual's scientific research output (cit. J.E. Hirsch).

The **h-index** evaluates an author impact inside a specific scientific community on the basis of the number of his/her publications and citations obtained.

The *h*-index is one of the most important function in <u>Scopus</u>.



### **SCImago Journal Ranking**

UNIVERSITÀ
DECLI STUDI
DI PADOVA

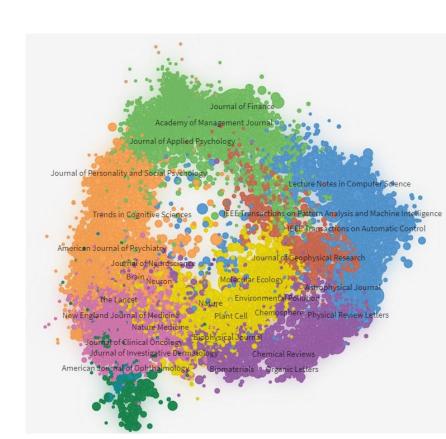
SISTEMA BIBLIOTECARI
DI ATENEO

<u>SCImago</u> a database that can be accessed for free online, which allows you to obtain statistics on the citations of articles published in peer-reviewed journals.

It provides statistics and compares the number of published articles and citations in each country.

Journal ranking

**Country rankings** 



Metrics illuminate the impact of your research outputs. Promotion and tenure committees, funders, advisors, research team leaders and potential collaborators are all interested in information about impact. But where to start? Your library can advise you on metrics — found on Elsevier products or via other sources — that can help you to: "Document" in the definitions refers to primary document types such as journal articles, books and conference paper. See Scopus Content Coverage Garde (page 9) for a full lat of document types: https://pag.gdbt.frenv DOCUMENT | | AUTHOR & | JOURNAL | The cases that the Snowball Metrics group agreed to include as a standardized metric, which is data source and system agnostic. https://www. CITATION COUNT DOCUMENT COUNT FIELD-WEIGHTED CITATION IMPACT (FWCI) sources for document count including Scopers, Researcher D. Cross Ref and PubMed. type (e.g., article, letter, review) and of the same age. An PWCI for example, s.ull means all % more cited than expected. h-INDEX CITESCORE SCIMAGO JOURNAL RANK (SJR) for example, an h-index of 8 means that 8 of the collection's source they come from. The subject field, quality and reputation of the journal have a direct effect on the value of a distinct. Can be applied to journals, book series and conference proceedings. SOURCE NORMALIZED IMPACT **IOURNAL IMPACT** PER PAPER (SNIP) BENCHMARK (ARTICLES) as part of the Journal Citation Reports® JCR also includes a Five-year Impact Factor SCHOLARLY **OUTPUTS IN TOP** SCHOLARLY PERCENTILES **ACTIVITY ONLINE** COMMENTARY ONLINE 2. Rume, A. & Kamakki, 1/March 2012). "Article downloads: An alternative indicator SOCIAL ACTIVITY MEDIA of national research impact and cross-sector knowledge eathange," Research Trends, ONLINE MENTIONS http://www.researchtrends.com/ssue-56-march-socs/article-downloads/ s. http://papers.sern.com/sols/papers.cfm?sbstract\_id-assa@s Micro-blogging sites may include Twitter, Facebook, Google+ and s. http://www.altmetric.com/blog/gaming-altmetrics/

CiteScore: SNIP and SRI are provided free at



others online and discover the latest research.

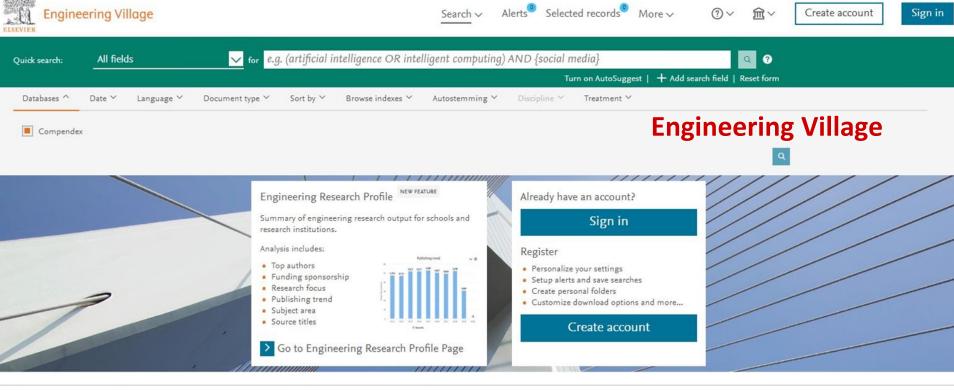


# Quick Reference Cards for Research Impact Metrics

https://www.elsevier.com/librarians/p roviding-library-services/researchmetrics-quick-reference









Engineering Village Customer Service
About Engineering Village Contact and support
Accessibility Statement Subscribe to newsletter
Content Available Blog
Who uses EV? Twitter

All engineering jobs
By job category
provided by Mendeley Careers

Careers

Feedback 🖵

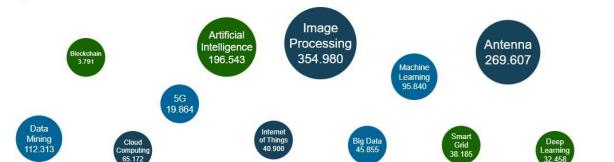






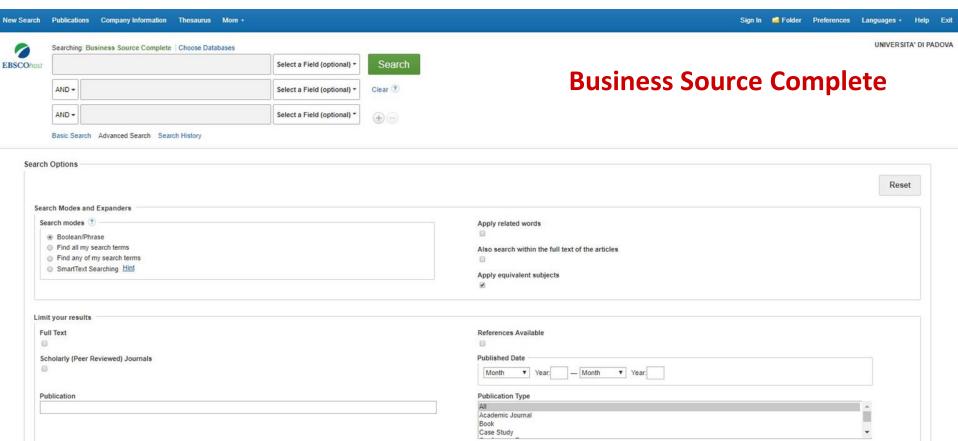
#### Top Searches and Documents o





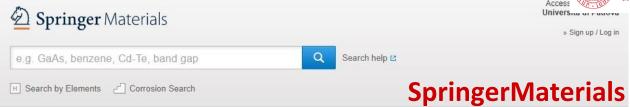


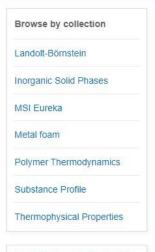












Landolt-Börnstein bookshelf
SpringerMaterials Interactive

#### SpringerMaterials celebrates the 2021 Nobel Prize in Physics winners

We join the world in congratulating Dr. Giorgio Parisi, Dr. Klaus Hasselmann and Dr. Suyukuro Manabe, the three Nobel Prize winners in Physics, for their pioneering contributions to the field of complex systems. We especially want to recognize the work of Prof. Parisi in the field of Quantum Chromodynamics (QCD), without which the Landolt-Börnstein volumes on particle physics would be incomplete. SpringerMaterials has become a trusted resource for researchers because of carefully curated content from the authoritative work of scientists like Prof. Parisi.



#### The research solution for identifying material properties

Fast and reliable insights accelerating materials science research

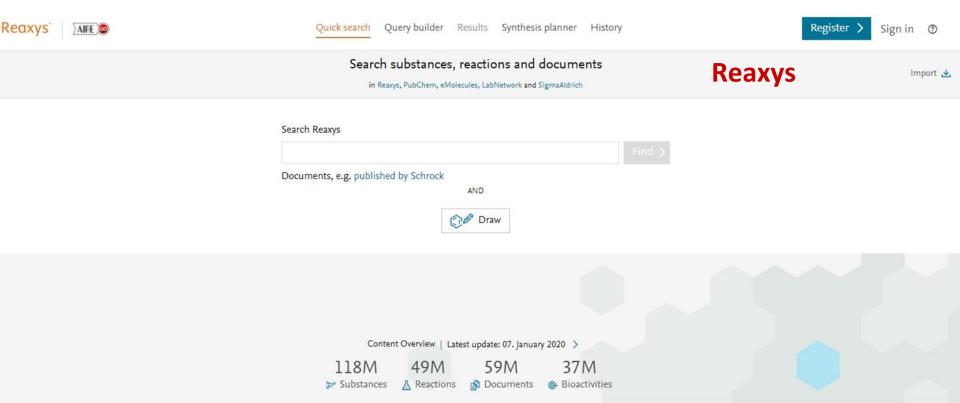
SpringerMaterials provides curated data and advanced functionalities to support research in materials science, physics, chemistry, engineering, and other related fields.

- · A comprehensive database covering multiple material classes, property types, and applications
- Enhanced data visualization features display interactive crystal structures, data tables, and phase diagrams with export options for further analysis









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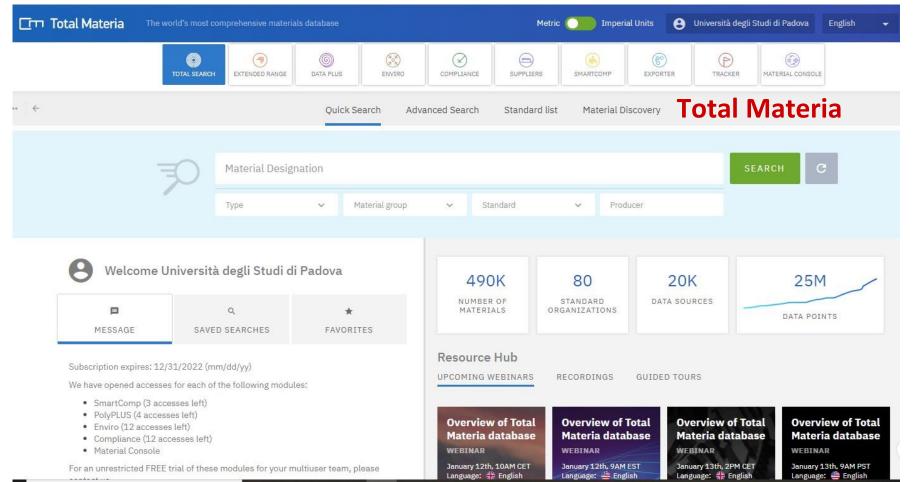
ELSEVIER

Terms and Conditions Privacy policy About content Performance Page Cookies are used by this site. To decline or learn more, visit our Cookies page RELX Group"

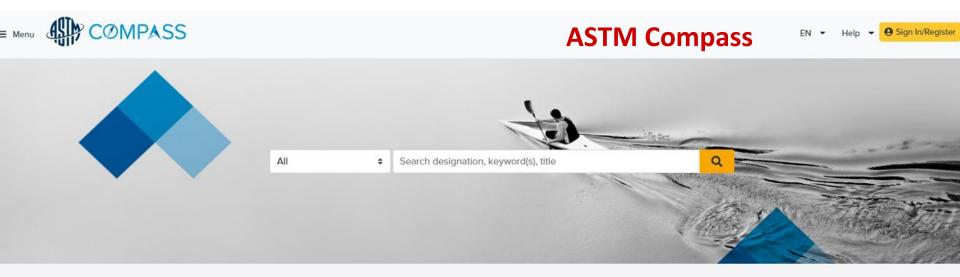
Feedback 💭







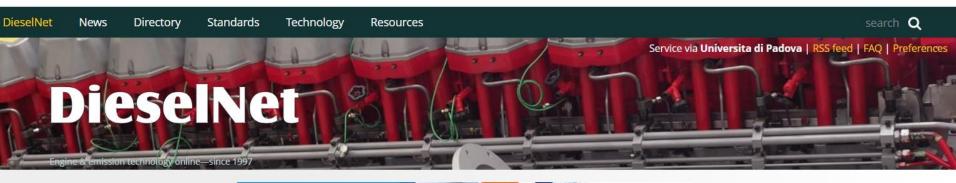




#### Welcome Back, Universita degli studi di Padova







#### Meeting the future of combustion engines





#### The Log

15 January 2022: The amount of electricity generated worldwide from coal reached a new annual record in 2021, undermining efforts to reduce GHG emissions and potentially putting global coal demand on course for an all-time high next year, according to IEA's Coal 2021 report [more ...]

13 January 2022: Trunett Environmental—now on DieselNet—is a China based manufacturer of emission control catalysts and systems for heavy-duty and stationary diesel engines. Trunett's product offering includes diesel oxidation catalysts, catalyzed diesel particulate filters and SCR catalysts for OEM, retrofit and aftermarket applications.

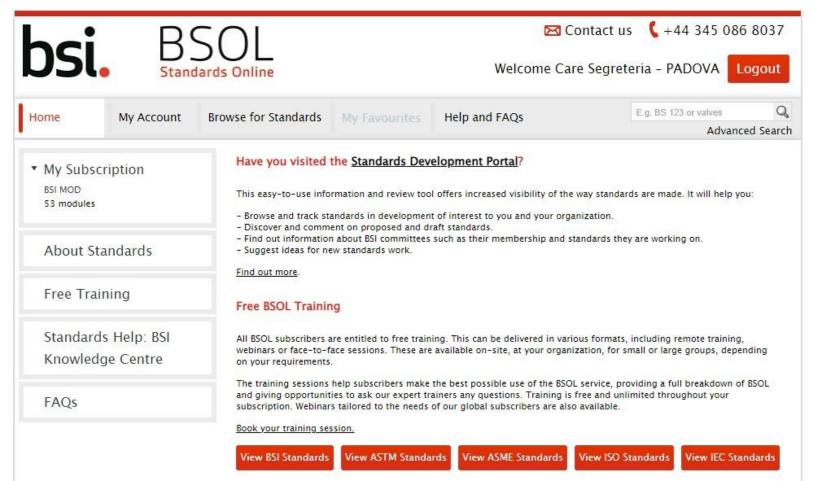
#### Our Sponsors















# Google Scholar

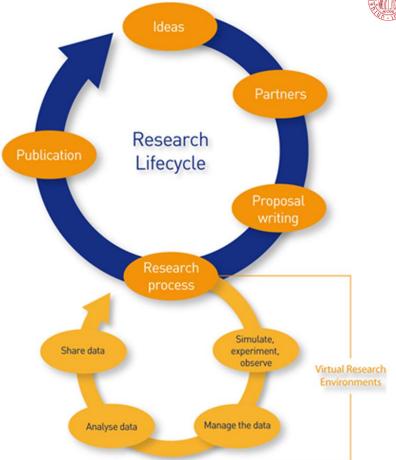
Stand on the shoulders of giants

Go to Google Scholar

Section 4 | Open access

The research lifecycle

Adapted original source: Joint Information Systems Committee (JISC), Stages of the research and data lifecycle, viewed 10<sup>th</sup> January 2020 https://www.researchgate.net/figure/Joint-Information-Systems-Committee-JISC-Stages-of-the-research-and-data-lifecycle fig1 51476349







## Introduction to Open Science



"Open science is the movement to make scientific research, data and dissemination accessible to all levels of an inquiring society"

**FOSTER** consortium

Open Science

Open Data

Open Source

Open Methodology

Open Peer Review

**Open Access** 

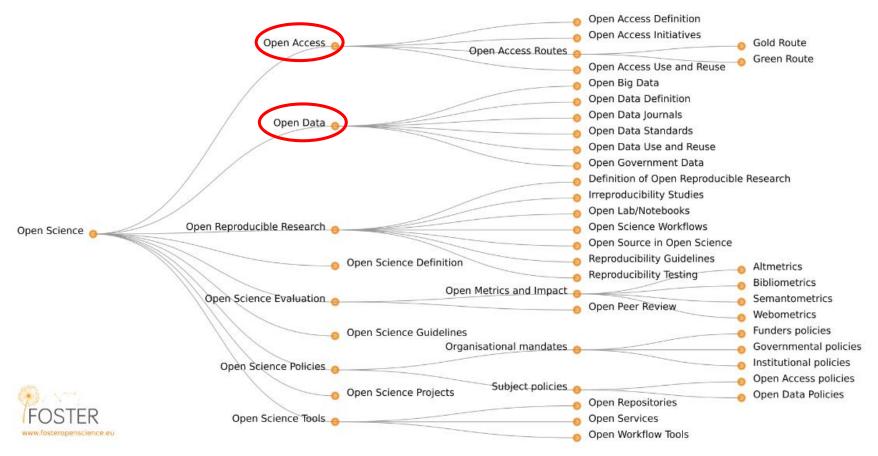
**Open Educational Resources** 

Andreas E. Neuhold – Opera propria – CC BY 3.0

#### **Open Science**







FOSTER consortium – Open Science taxonomy – related article









Padova Digital University Archive

contacts

#### Global Search

>>

#### Type of searches:

> simple

> advanced

> only full text records

Browse

Author

Year

Subject

Division

Ph.D

For companies

#### Statistics

Statistics Latest

#### The Archive

Repository policies Create account

User Area

Submit a thesis

Submit a document Copyright

#### Link

Padua@thesis

#### Welcome to Padua@research

#### WARNING

If you need to submit your document for the evaluation of research (VQR), please remember that you have to use the intsitutional repository Padua Research Archive (IRIS)

Padua@research is the Istitutional Repository for University of Padova Research Works. This Archive contains digital documents derived by the scientific activity of teaching staff, researchers and fellow-workers of this Athenaeum. In Padua@reaserch are also stored Ph.D thesis.

All the operations to deposit, modify and access to the works are very simple.

The self-archiving procedure makes visible on the web the full text of the stored works. [Continue...]

#### What do you want to do?



Search for a work



Register



Deposit a document / Access to my area



Deposit a Ph.D thesis



Tell me more



Padua@Research supports OAI 2.0 with a base URL of http://paduaresearch.cab.unipd.it/cgi/oai2





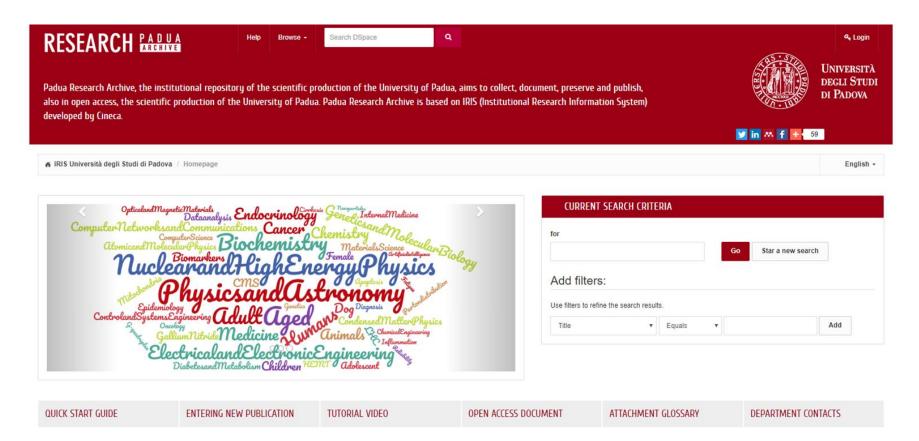




# Section 4 | Padua Research Archive (IRIS)







# Padua Research Archive (PRA) as an Open Access archive: IRIS beyond Research evaluation



PADUA RESEARCH ARCHIVE

https://www.research.unipd.it/

# Institutional archive OPEN ACCESS

the version of your work as it is allowed by publishers *or* open access

Repository for RESEARCH EVALUATION (ANVUR, MIUR...)

Metadata and editorial version

# Padua Research Archive (PRA) as an Open Access archive: IRIS beyond Research evaluation







# Padua Research Archive (PRA) as an Open Access archive: IRIS beyond Research evaluation



Checks whether the publisher's policies allow you to publish open access

Once you have uploaded your work to IRIS/PRA the research support group:

Checks the embargo dates and validates the attachment

Supports authors via SBA Help - Research Support - OA

#### RESEARCH PADUA

The validation process involves a delay in the publication of the OA content in PRA, but protects the author.

It is possible to report contributions that need to be displayed on the faster public portal.

# Padua Research Archive (PRA) as an Open Access archive: IRIS beyond Research evaluation



Who uploads attachments to PRA?

Authors and departmental representatives

Who should I contact if there are any technical issues?

Research Office
Settore Supporto
Informativo
Valutazione Ricerca

Who should I contact re: uploading open access content?

Author support via
Library Helpline
queue:
Supporto Open
access (supporto
ricerca)

#### Uploading content to PRA





#### For evaluation

Contribution for which publication rights are transferred to the publisher: the attachment will be visible only to the evaluators

Contribution already published in OA: the attachment will be visible to everyone

Attachments declared completely open access by authors are still checked

#### **For Open Access**

pre-print
post-print (embargo if needed)
editorial version (if it is allowed)

Contribution published in Open Access journals





what to do before publishing

Always check publishers' policies regarding self-archiving!

SHERPA ROMEO collects the content policies of publishers and academic journals by exemplifying them



Think. Check. Submit.

Through a range of tools and practical resources, this international, cross-sector initiative allows you to critically judge and identify the most suitable and highest quality open access magazine

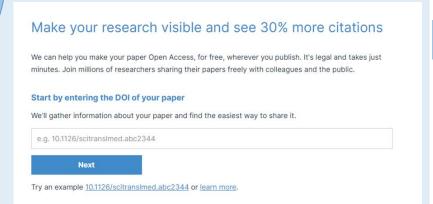


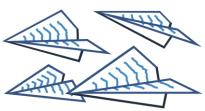


what to do before publishing

If your content has a DOI you can use shareyourpaper.org: it will run a permissions check and tell you if and how you can share it.

What you get is a link like this one: <a href="https://zenodo.org/record/3703317">https://zenodo.org/record/3703317</a>





Shareyourpaper.org by OA.Works



if you are publishing in an OA journal

- Check whether the publisher is listed in directories such as **DOAJ** (a directory that indexes and provides access to quality, peer-reviewed, open access journals) as well in disciplinary and multidisciplinary databases
- https://beallslist.net/: a list of potential predatory journals
- Choose a **Creative Commons** license
- Check the **APC** costs



what to do during publication

Keep the different versions of your work:

- the version you sent to the publisher (pre-print)
- the «accepted» version (*post-print*) without minor revisions, logos etc.





#### Open Access: discounts for authors

**University Library System** 

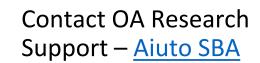
Thanks to specific agreements between University and publishers, if a scientific contribution is published in Open Access there are some discounts on the payment of APCs and some reductions on the cost of publication

Where to find copyright and self-archiving information



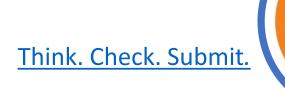








Publishers' websites





OA@unito.it



# Open Access: a wrap-up

- → Increased visibility → higher citation rates
- → Recognized in promotion and tenure
- → OA journals / self-archiving (Padua Research Archive)

#### Section 5 | Open Data





Open Data are online, free of cost, accessible data that can be used, reused and distributed, provided that the data source is attributed.

**FOSTER Consortium** 

# Accessible data / Open data





 Data must be accessible to both the scientific community and ordinary citizens (citizen science)

Accessible data

# Open data

 Data are open if they can be freely accessed, used, modified and shared by anyone and for any purpose

- <u>Checklist</u>: How open are your data?
- [Codata] <u>Legal</u>
   <u>Interoperability of</u>

   <u>Research Data:</u>
   <u>Principles and</u>
   <u>Implementation</u>
   <u>Guidelines</u>

Useful tools

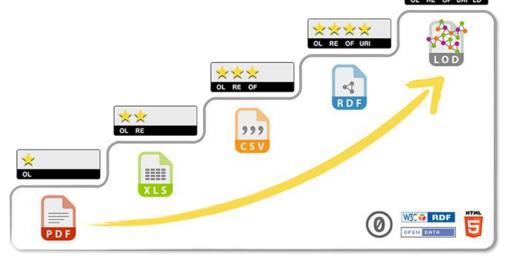
## Open data: a five-stars rating system



OL (On Line) open license

OF (Open Format)
URL (Uniform Resource Identifier)
LD (Linked Data)

- available on the web + distributed with an RE (Readable)
- • machine-readable structured data
  - ••• encoded with non-proprietary software
- •••• identified by an URL
  - ••••• linked to other data sets



## The FAIR Data principles















































#### What are research data?





Recorded information (regardless of the form or the media in which they exist) necessary to support or validate a research project's observations, findings or outputs



Charts













Digital texts or digital copies of text



**Databases** 



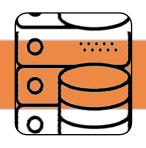
Video

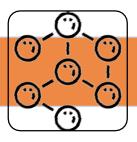
#### BUT ALSO...

- Computer Aided Design (CAD)
- Waveforms
- Computer codes
- Statistics (SPSS, SAS)
- File Matlab
- Artistic products

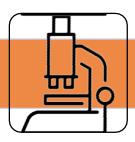
#### General categories of data

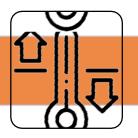












# Derived or compiled

(e.g. compiled databases, text or data mining)

reproducible but expensive

#### Reference

(e.g. gene sequences databases, chemical structures, portals with spatial data)

#### **Observational**

(e.g. sensor readings, survey instruments)

acquired in real time and usually irreplaceable and not replicable

#### **Experimental**

(e.g. gene sequences, magnetic fields data)

lab equipment readings, generally reproducible but expensive

#### **Simulation**

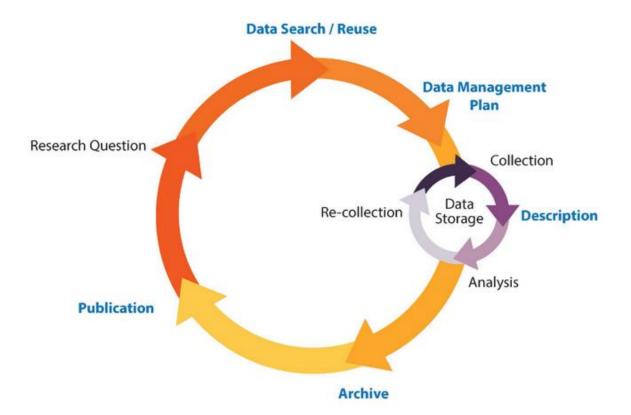
(e.g. climate models)

from test models, not always replicable

## Research data: lifecycle



#### The Research Data Curation Lifecycle



#### Research data: life cycle



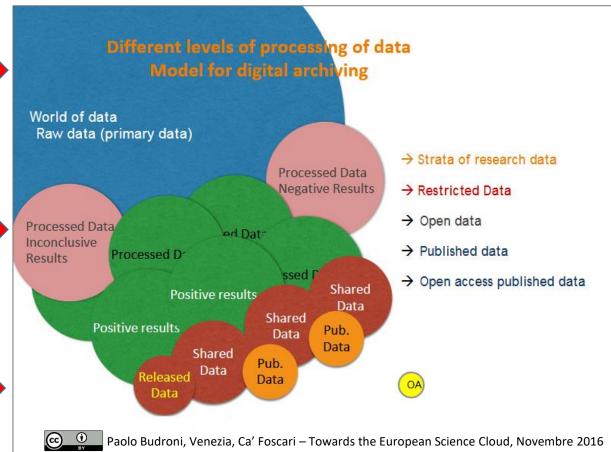
Raw data collected or generated during the research.



Data are then processed and analyzed; they can lead to positive, negative or inconclusive results.



Only a small part of the data collected during a research is included in a publication.



## Managing research data: 5 steps 1. Collect 2. Reasonably name data research data Tips on metadata standard for different disciplines 4. Record data through metadata 3. Structure data in hierarchical systems 5. Pay attention to the file format (Guide on "naming and version control" Gaelen Pinnock (cc)

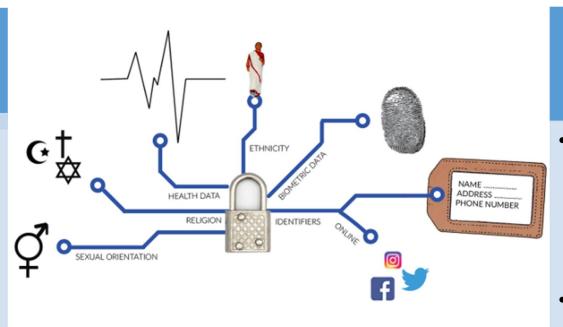
# Privacy and personal data



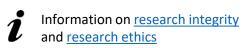
Works containing sensitive data relating to identifiable persons must not be disseminated in Open Access!

# BEFORE collecting data:

- Carry out a risk assessment
- Choose which data to collect + follow the minimization principle
- Prepare an informed consent document (information about the research, the subjects involved, the way data is going to be shared and stored)



# GDPR (General Data Protection Regulation)



# AFTER collecting data:

- Protect the identities
   of the subjects
   involved (e.g.
   pseudonyms; keeping
   the information that
   allows identification in
   a separate archive)
- Anonymize + aggregate data
- Regulate access

# Data Management Plan (DMP)







 Are your data going to be open?



A formal document that needs to be devised at the beginning of the project.

It outlines in detail:

Management

 Activities related to the structure, storage and security of data



Research Office –
Settore Supporto
Informativo
Valutazione Ricerca



<u>Library Helpline</u> –

queue: 09 Tesi di dottorato (Padua@research) • Periodically reviewed and updated



# How to manage research data



where

#### Policy sulla gestione dei dati della ricerca<sup>1</sup>

#### 1) Premessa

L'Università degli Studi di Padova riconosce l'importanza fondamentale dei dati prodotti durante l'attività di ricerca. Pertanto riconosce la rilevanza della loro gestione per il mantenimento della qualità della ricerca scientifica e si impegna ad applicare i più elevati standard per la loro raccolta, archiviazione e conservazione.

L'Università degli Studi di Padova riconosce che dati della ricerca affidabili e facilmente reperibili sono alla base di ogni progetto di ricerca e sono altresì necessari per la verifica di attendibilità e correttezza della conduzione e dei risultati del progetto e per la sua riproducibilità.

L'Università degli Studi di Padova riconosce che i dati della ricerca, costituiscono patrimonio dell'istituzione universitaria, nonché risorsa - anche a lungo termine - per la ricerca, la didattica universitaria ed il progresso della società.

Ai fini della presente policy si considera la definizione di "dati della ricerca" e di "afferenti all'Università di Padova" così come da allegato 1.

#### 2) Ambiti di applicazione

La presente "policy" si applica a tutti i progetti di ricerca dell'Università limitatamente alle parti di cui essa è responsabile attraverso i propri afferenti che sono tenuti ad osservarla. Nel caso in cui la ricerca sia stata finanziata da parti terze ed esistano accordi specifici relativi al controllo dei dati, al loro accesso e conservazione, tali accordi prevalgono sulla presente policy.

#### 3) Trattamento dei dati della ricerca

Nel rispetto della vigente normativa in materia di protezione dei dati personali e di proprietà intellettuale, nonché delle disposizioni contenute nello Statuto e nei regolamenti dell'Università e fatti salvi gli specifici accordi per il finanziamento della ricerca stipulati con terze parti, i dati della ricerca, una volta pubblicati, sono archiviati e resi liberamente disponibili all'uso per finalità di ricerca scientifica o storica, o di pubblico interesse.

I dati della ricerca devono essere archiviati nell'archivio digitale dell'Università degli Studi di Padova denominato "Research Data UniPd" oppure in un archivio digitale che rispetti gli standard internazionali.

Tali dati devono essere archiviati in modo corretto, completo, affidabile, rispettandone l'integrità. Devono inoltre essere accessibili, identificabili, tracciabili, interoperabili e, laddove possibile, disponibili per usi successivi (principi FAIR²).



# Research Data: a wrap-up

- → FAIR = can be found, understood and reused
- → Open = can be used, modified and shared by any person
- → Managed through a DMP and deposited in a data repository

# Section 5 | Research Data Unipd

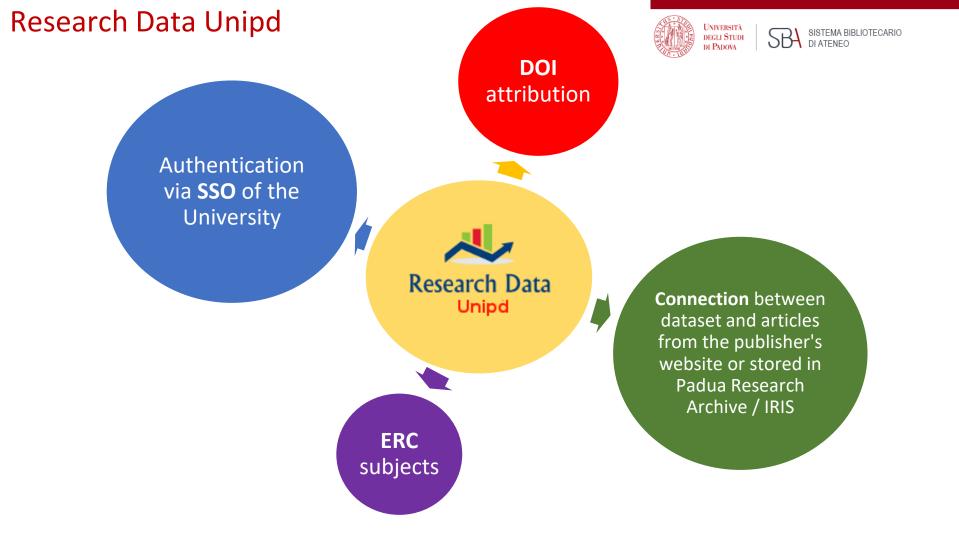




#### Research Data Unipd

is a platform for longterm management and archiving of research data and for the access and re-use of data necessary to validate the results of scientific publication







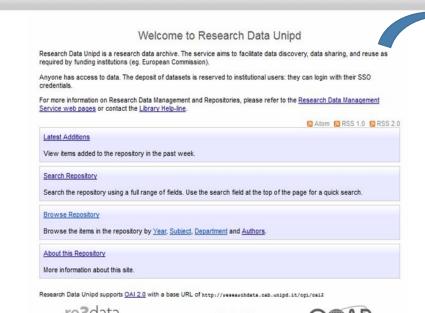






Search





openDOAR

It allows the selfarchiving of datasets of any format with FAIR mode, as recommended by the European Commission.





#### About the Repository

#### About Research Data Unipd

Research Data Unipd supports research produced by members of the University of Padova. The service aims to facilitate data discovery, data sharing, and reuse as required by funding institutions (eg. European Commission).

#### Quality

Datasets published in the Archive have a set of metadata that ensure that data are described and discoverable. Before publication, dataset records are checked by Editors for presence of appropriate metadata.

#### Metadata Policy

All published metadata are released under a CC0 licence.

#### Re-using data

We encourage Researchers to use licences on their datasets to promote reuse of the research data. The licence to be preferred is Creative Commons Attribution 4.0, but several others are used. Any re-use must acknowledge the Creators in an appropriate manner, ideally through a citation similar to that provided with the record.

Recommended formats and data files

Formats and data files.

#### Submission policy

Submission policy concerning depositors, quality & copyright.

Data deposit agreement

Agreement to terms and conditions.





#### HowTo

Before you start to upload data ...

- If you have a large number of files, zip them into manageable bundles before you start.
- Name your files in a significant way and avoid using spaces, dots and special characters; use hyphens (-) or underscores
   (\_) to separate elements.
- You can upload any type of file, but we ask you to use <u>open formats</u> whenever possible to ensure long-term preservation and accessibility.
- Locate any data you want to upload along with any supplementary materials, such as a readme file. Of course it should not be included into a compressed folder.
- If you have an <u>ORCID</u> make sure you have it to hand, you can enter this along with your personal details and with those of your co-authors.
- If the data underpins a published paper you will need to include the identifier (DOI, handle, etc.) of the paper in the dataset record.
- If you're funded you will need to enter the funder name and your grant number.
- Have you checked your <u>funder policy</u> on research data? There may be specific requirements.
- . Do you know how long your data needs to be kept? Your funder may specify a retention period.

#### Walk-through guide to depositing

This guide takes you through the steps required to deposit a data set on Research Data Unipd.

Log in and User area

#### A dataset

#### A dataset for hand-eye calibration evaluation

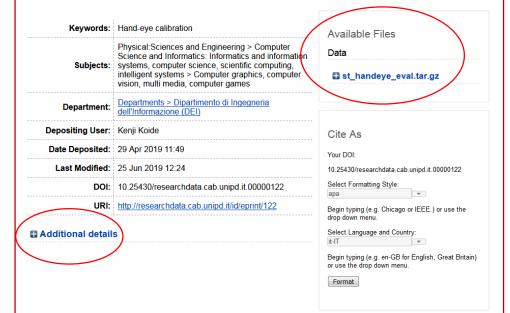
Koide, Kenji and Menegatti, Emanuele (2019) A dataset for hand-eye calibration evaluation. [Data Collection]

Related publications:

https://ieeexplore.ieee.org/abstract/doc... (Publisher)

#### Collection description

Description: This dataset aims to assess the accuracy of hand-eye calibration methods (i.e., estimation of the transformation between a robot end effector frame and a camera mounted on it). It contains two sets of images and corresponding robot hand poses. The first one (calib\_test) contains images of a calibration pattern to estimate the hand-eye transformation. The second one (spirit\_reconst) contains images of a pattern to be 3D reconstructed and manually annotated 2D feature points on the images. By performing multi-view 3D reconstruction on the second set and checking the flatness of the reconstructed points, the calibration accuracy can be assessed. The dimension of the calibration pattern in this dataset is 32 mm. Paper: Kenji Koide and Emanuele Menegatti, General Hand-Eye Calibration based on Reprojection Error Minimization, IEEE Robotics and Automation Letters/ICRA2019







#### Details of the dataset

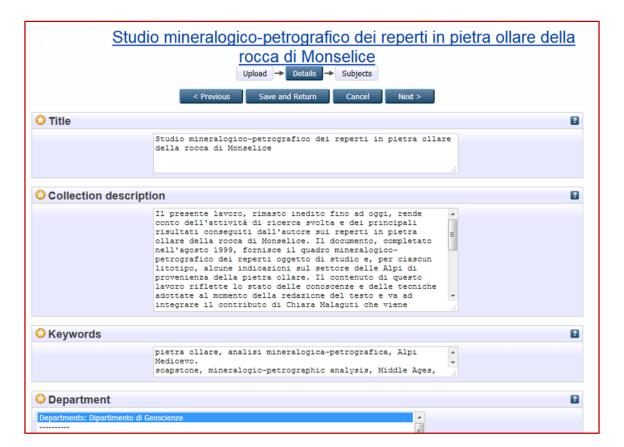
Additional details					
Creators/Authors:	Creators Zane, Antonella	antonella zane@uniod it		ORCID  © orcid.org/0000-0001-7218-6068	
Type of data:	Text				
Contributors:	Contribution		Name		Email
	Editor		Chavarria Arnau, Alexandra		UNSPECIFIED
	Editor		Brogiolo, Gia	npietro	UNSPECIFIED
Collection period:	From	То			
	1999	2000			
Geographic coverage:	Italia - Veneto				
Data collection method:	Utilizzata microsonda eletronica (EMPA), microscopio a Trasmissione elettronica (TEM), diffrazione RX su polveri, analisi petrografica al microscopio polarizzatore.				
Statement on legal, ethical and access issues:	La ricerca non ha prodotto dati sensibili né altri tipi di dati con rilevanza etica.				
Data processing and preparation activities:	occidentali; frammenti di reperti archeologici provenienti da recipienti in				





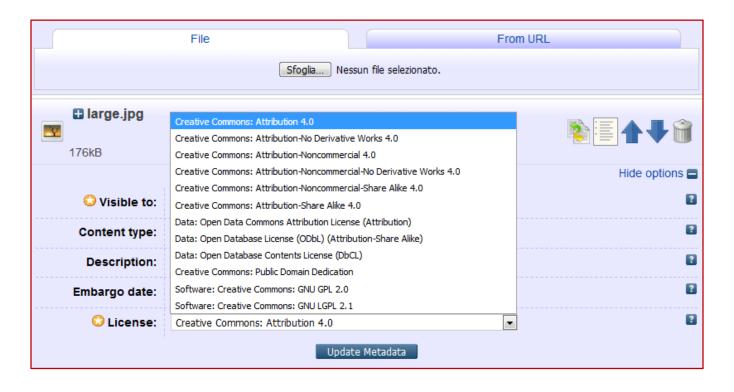


#### Descriptive elements



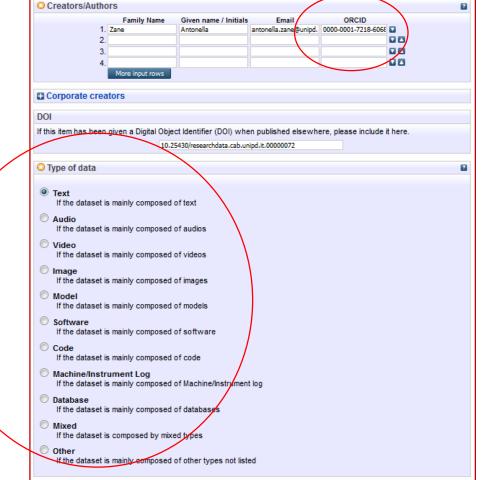


#### Licenses for use





**Authors** 



Type of data



#### Fields reserved for information on lenders

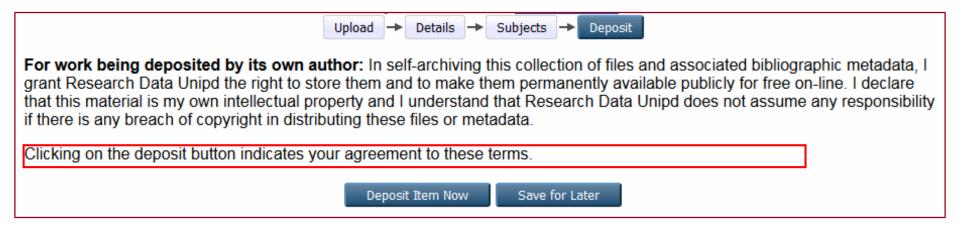


#### Links to documents on publishers websites or in Padua Research Archive / IRIS





#### License for archiving and dissemination





#### Deposit and publication flow

The researchers upload the datasets and add the metadata

Validation of metadata

#### Publication:

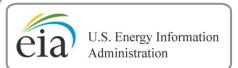
- the complete record
- only metadata (in case of embargo)

# Science research data: guidelines & tools





The <u>American Chemical Society Publications (ACS)</u> is a non-profit scholarly publisher that provides a comprehensive collection, in any medium, of high-quality information products and services that advance the practice of the chemical and related sciences.



The <u>U.S. Energy Information Administration (EIA)</u> provides a wide range of information and data products covering energy production, stocks, demand, imports, exports, and prices. EIA is committed to enhancing the value of its free and open data by making it available through open data tools.



<u>The Open Access Scholarly Publishers Association (OASPA)</u> is a non-profit trade association representing the interests of open access journal publishers globally in all scientific, technical and scholarly disciplines



<u>"S-légami! Open Access — Manuale d'uso per ricercatori"</u> is a freely available manual that was born in the APRE Working Group dedicated to Open Science and contains the answers to the most frequent questions and concerns of researchers on open access and open data.



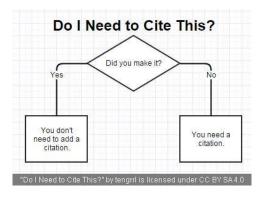
<u>OpenAIRE</u> is a pan-European research information system, which provides services for finding, storing, linking and analyzing research results from all disciplines. Its mission is to move academic communication towards openness and transparency and to facilitate innovative ways to communicate and monitor research.

# Section 6 | Reference management software



#### What is a bibliography?

For the purposes of a research project, the bibliography is an **organised list** of the documents, books, articles, essays and web pages that have been consulted.



When drawing up a bibliography, the author/s has to decide on a citation style.

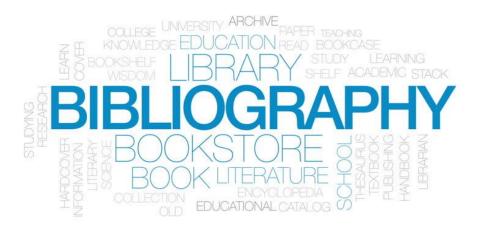
# Why use reference management software?





#### These applications can help you:

- import citations from catalogues, databases and websites
- create and organize bibliographies for theses, books and articles
- insert and format citations within the text of documents



# What are the types of citation management tools?



Many applications are available, but here are the most popular softwares:



Mendeley (free) – <u>help guides</u> <u>Zotero</u> (free) – <u>help guides</u>

If you're not sure which citation management software is best for you, check out <u>our comparison chart</u> (Italian version).

#### Do you need help?

The University Library System periodically organize training courses of Mendeley and Zotero.

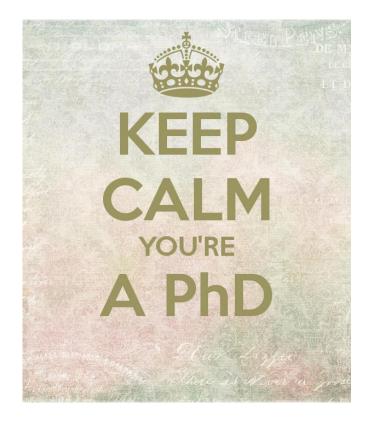
To verify available dates, you just have to check this link and choose your location:

http://bibliotecadigitale.cab.unipd.it/en/training-courses

You can access to the courses in all the libraries of the University, so not only in Engineering Libraries.







# Courses in February:







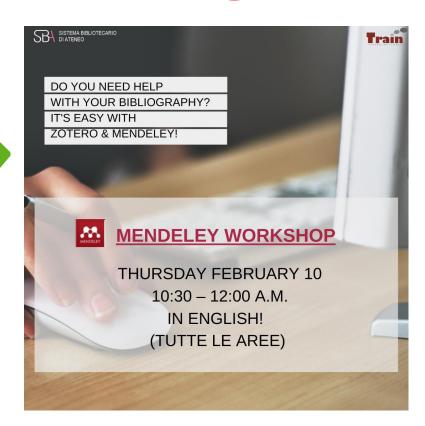


Photo credit: kylemahaneyphotography via VisualHunt / CC BY-NC









- Engineering libraries contacts:
   <a href="mailto:biblio.inge@unipd.it">biblio.inge@unipd.it</a> <a href="mailto:biblio.dim@unipd.it">biblio.dim@unipd.it</a>
- for any information about the **credits**, please ask to the administrative office of your Department.

# Satisfaction survey

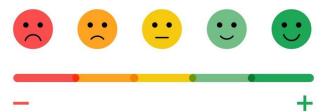




http://www.cab.unipd.it/corsi-sba-questionario

Username: 25672

Password:



The collected information will be used only for statistical purposes in order to improve the quality of the courses for library users.

We will appreciate your cooperation and help!