



Publishing data in ETH Zurich's Research Collection

Barbara Hirschmann, ETH Library SCCER-SoE Workshop on Data Management in Science Bern, 22 May 2018



Research Collection: a «3 in 1» repository for ETH Zurich





Publication directory / university bibliography



Open access repository



Research data repository



www.research-collection.ethz.ch





Research data repository

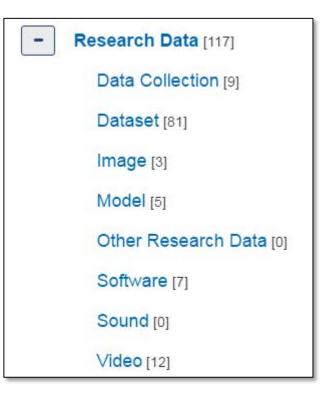
- Publish, share or archive research data
- As supplementary material or stand-alone publication
- All file formats allowed, recommendations for suitable formats provided
- Free service for ETH members (up to 1 TB per research group)





Research data types







Access rights options

	Open access	Embargoed	ETHZ users	Selected users	Closed access
Publications	✓	✓			
Research data	✓	✓	✓	✓	✓

- Access rights are chosen by the submitter
- Access rights refer to files. Metadata are always visible and indexed in search
- Closed access and selected user items do not receive a DOI
- Access to restricted data can be requested via a form, decision is taken by submitter / rights holder



File size limits

- Current recommended maximum file size for Research Collection: 2 GB
- Challenges with larger files: Upload, download, browser limits, network connection,...
- What's next?
 - ✓ Evaluate possible locations and retrieval scenarios for large files.
 - ✓ Possibly create «Metadata only» records in Research Collection as «DOI Landing Pages» and link users to external location for retrieving the actual data
 - ✓ [This is work in progress...]



Retention periods

Submitters choose between on of the following retention periods:

• 10 years «Good scientific practice»

15 years «Good scientific practice» + safety margin

Indefinite
 Use of recommended file formats strongly encouraged

Gives ETH Library the possibility to take necessary archiving / deletion decisions



End user licences for research data

Licenses for research data

Creative Commons Attribution 4.0 International

Creative Commons Attribution-ShareAlike 4.0 International

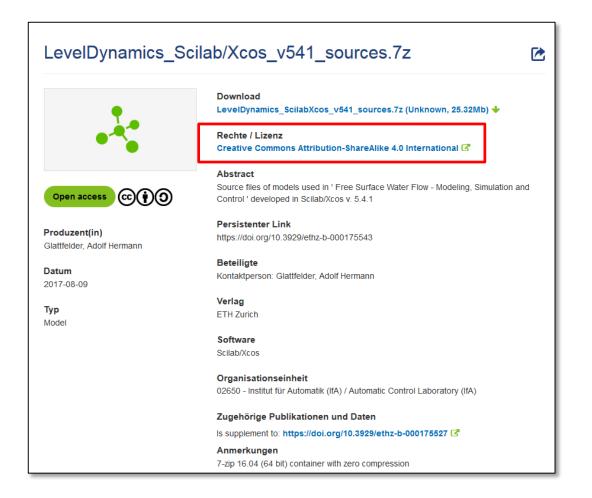
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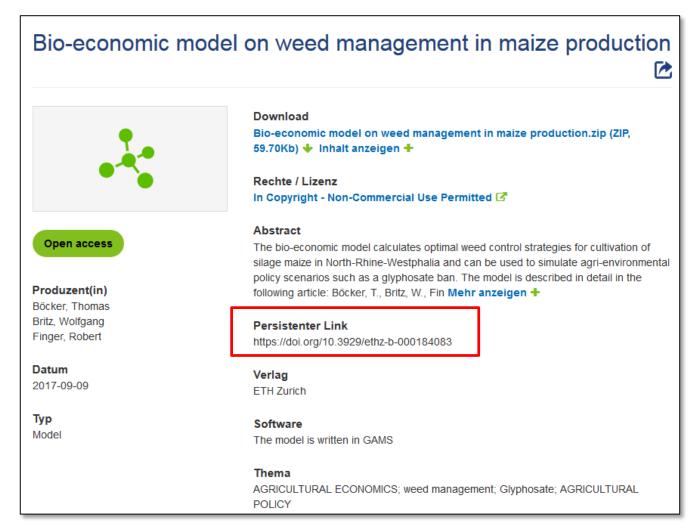
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Public Domain Dedication (CC0 1.0 Universal)



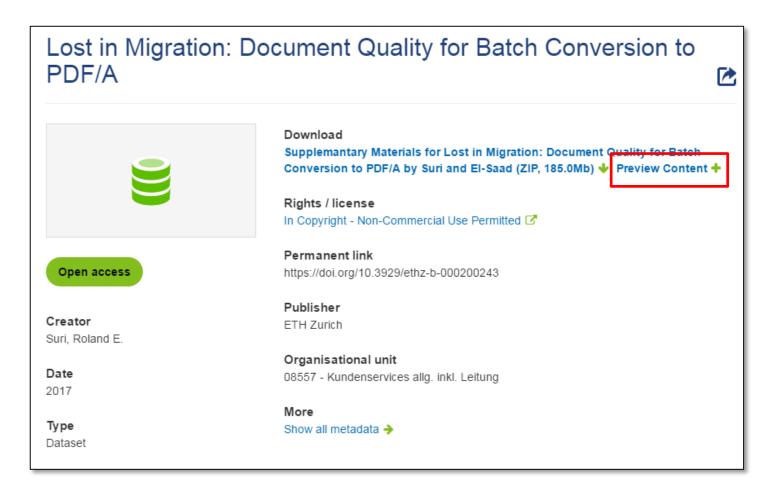


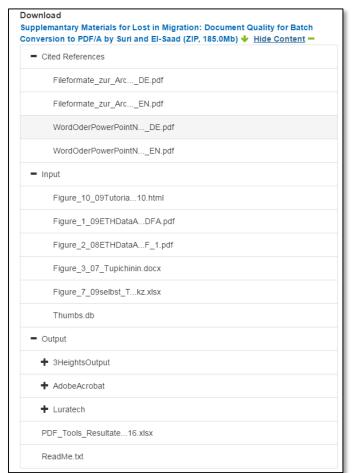
Citable DOIs & DOI preview option





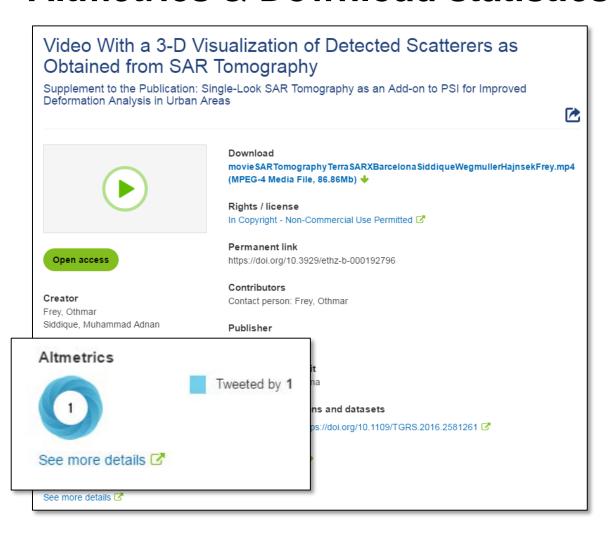
Content preview for ZIP- and tar containers

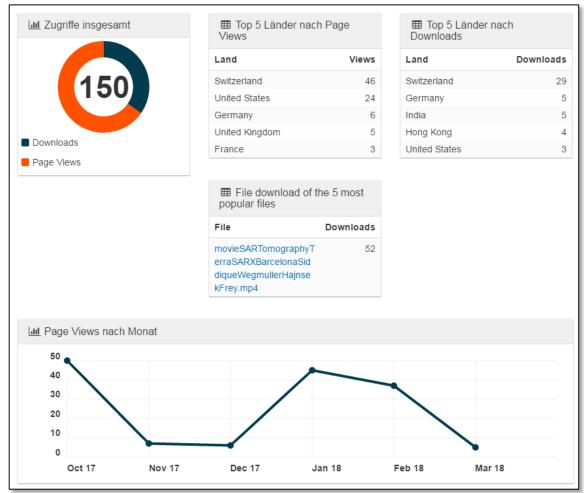






Altmetrics & Download statistics





Linking between publications and datasets





Versioning

From a citation perspective...

- ...an object that has been allocated a DOI name should not be altered
- ... an updated object should be published as a new version and a new DOI name registered for it

Related publications and datasets

Is supplemented by: https://doi.org/10.3929/ethz-b-000217536
Is new version of: https://doi.org/10.3929/ethz-b-000222143



Publishing dynamic datasets

Dynamic datasets require a strict versioning policy.

Four **approaches** recommended by DataCite:

- 1. Publish and cite a specific **slice or subset** (the set of updates to the dataset made during a particular period of time or to a particular area of the dataset)
- 2. Publish and cite a specific **snap-shot** (a copy of the entire dataset made at a specific time)
- 3. Publish a **continuously updated dataset**, and when citing it, add an access date and time to the citation
- 4. Cite a **query**, time-stamped for re-execution against a versioned database (currently not supported by Research Collection)
- → "Slice" and "snap-shot" are versions of the dataset and require unique DOIs/identifiers
- The third option is controversial, because it necessarily means that following the citation does not result in observation of the resource as cited, which in turn limits reproducibility



Citation of research data

Format recommended by DataCite:

Creator (PublicationYear): Title. Version. Publisher. (ResourceType). Identifier

Example:

Swaminathan, R., Ramya, T., Karthik, C.S. (2013): Contortrostatin-Reprolysin Domain Structure. Swiss Institute of Bioinformatics. (Model). https://doi.org/10.5452/ma-c12zs

DataCite Metadata Working Group. (2017). DataCite Metadata Schema Documentation for the Publication and Citation of Research Data. Version 4.1. DataCite e.V. https://doi.org/10.5438/0014.



From informal to formal data citation

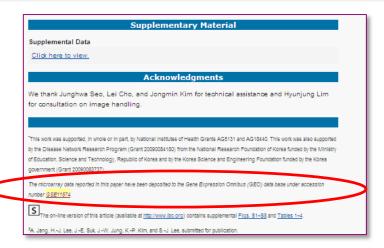
Our first data set is the Bureau of Justice Statistics "Murder Cases in 33 Large Urban Counties."

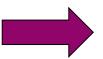
This is a random sample of nomicide cases drawn from prosecutors' files. The data set includes information on offender characteristics, victim characteristics and trial outcomes for 2800 murders. The 75 largest counties account for more than half of the murders in the U.S. each year. This data set brings together information on the crime, the offender, the victim, and the sentence. Such information cannot all be linked in other larger data sets such as the Uniform Crime Reporting (UCR) Data or the National Crime Victimization Survey (NCVS). Most crime



U.S. Dept. of Justice, Bureau of Justice Statistics (1996): Murder cases in 33 large urban counties in the United States, 1988. Version 1. Inter-university Consortium for Political and Social Research.

https://doi.org/10.3886/ICPSR09907.v1





Lee, Seung-Jae; Lee, He-Jin; Cho, Ji-Hoon; Rho, Sangchul; Hwang, Daehee (2008): GSE11574: The responses of astrocytes stimulated by extracellular a-synuclein. Gene Expression Omnibus.

https://www.ncbi.nlm.nih.gov/geo/query/acc.cgi?acc=GSE11574



Take away: Recommendations for publishing research data

- Deposit in trustworthy repositories (→ check <u>www.re3data.org</u>)
 - Provides landing pages for individual datasets
 - Provides human and machine-readable metadata for datasets
 - Provides DataCite DOIs or other persistent identifiers for data
 - Provides the option to use open content licences
 - Has sustainable funding sources
- Follow the file-format recommendations provided
- Provide enough descriptive metadata so others can find and make sense of your data
- Include data citations in formal reference lists
- Use the **DOI** whereever you cite, mention or link your dataset



Thank you! – Questions?

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