

Recommendations for researchers on how to increase their visibility

Subproject 5 – Visibility of Open Access Publications



Cite as: Ferus, A., Gumpenberger, C., Hölbling, L., Holzner, B., Reitbrecht, C., Sams, B., & Schilhan, L. (2024). Recommendations for researchers on how to increase their visibility. Zenodo. <https://doi.org/10.5281/zenodo.13983373>. Online auch unter: <https://phaidra.univie.ac.at/o:2095102>.



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Recommendations for researchers on how to use altmetrics to increase visibility

Altmetrics offer a valuable addition to traditional citation metrics by mapping the reach and resonance of academic work in real time and in a variety of digital contexts. They capture data from social media, news portals, academic blogs, Wikipedia, policy documents, patents and numerous online platforms.

Altmetrics paint a more comprehensive picture of the actual impact of scientific achievements. Academics can use them proactively for their publication strategy, and they also provide a valuable complementary approach to evalua-

ting research performance. Crucial to this is that altmetrics, on the one hand, offer a broader perspective on the visibility of research results beyond the "publish or perish" paradigm and, on the other hand, provide evidence that attests to the involvement of a wide variety of target groups. Ideally, this would make it possible to recognise interesting research trends or identify relevant outputs that (could) significantly impact society.

Here are some practical recommendations for academics on using altmetrics effectively in their everyday activities:



Availability

Altmetrics encompass a wide range of online attention, including X-posts (formerly known as tweets), mentions in academic blogs and news articles, likes, shares, and citations on Wikipedia, in policy documents and in patents.

Academics should familiarise themselves with these different communication channels, the opportunities they offer, and the types of information they generate.

Altmetrics are now standard in most online academic journals, CRIS portals like Pure and the multidisciplinary databases Scopus (integrated as PlumX Metrics) and Dimensions. Tools such as the Altmetric Explorer, which requires a licence, and the freely accessible Crossref Event Data also offer ways of analysing altmetrics data.

Another useful tool is the freely accessible browser add-on Altmetric Bookmarklet, which allows users to look up altmetrics data on a specific academic work with a single click.

Research support services at many universities and research institutions offer assistance in science communication and publication strategies and help with questions relating to altmetrics. Academics should make active use of these resources, as well as the associated guidance and training on offer, to develop their careers. Adept use of altmetrics tools and an understanding of how to analyse and interpret altmetrics data are good distinguishing features in an increasingly competitive academic landscape.



Interpretation and use

When interpreting altmetrics, both quantity (the number of mentions) and quality (the source and context of the mentions) must be considered.

With altmetrics, as with citations, the absolute numbers and the associated calculated scores are only of limited significance. Normalisation (when output is viewed in the context of a defined reference group) certainly increases the informative value. This option is currently only offered in rudimentary form in altmetrics tools, but, at least in the Altmetric Explorer, it is due to be added as a standard feature in the foreseeable future.

Attention does NOT automatically indicate a positive effect or high quality. It is essential to look beyond absolute values and instead use altmetrics (together with citation metrics) in a nar-

rative way to emphasise the qualitative characteristics of your research output:

When and where do the discussions take place? Who is involved? What is said? Who uses my output? Who benefits from my research? Has this research output informed or influenced other work in any way? If so, in what way?

Altmetrics, therefore, provide not only quantitative values but also a wealth of qualitative information that academics can use to good effect when writing CVs, applications, project proposals or research reports. The narrative form helps to illustrate broad interest in research output or social relevance, for example, positive mentions in major news portals or in the policy documents of renowned international organisations.



Strategic use of digital multipliers

An active presence on X (Twitter) and Facebook and intentional use of Wikipedia, academic blogs and mass media to disseminate academic content can significantly increase the visibility and reach of scientific achievements. Academics should make sure to present their work in an

appealing and comprehensible way to reach a broad audience. In addition, when disseminating your output by these means, it is vital to always provide it with a persistent identifier (ideally a DOI) so that altmetrics providers can find and index the content.

Recommendations for increasing visibility, beyond altmetrics

Well-established qualitative and quantitative approaches

Peer review

Peer review is the central element in the self-regulation of science. It is a procedure for assessing and selecting academic work by scientists – peers from the same subject areas. Reviews are carried out for manuscripts of journal articles or books, as well as research proposals and applications for academic positions and prizes.

Peer review is intended to ensure professional and constructive quality control and assurance in science. Therefore, scientific papers that have undergone peer review are more reliable sources than texts without peer review. When selecting journals or publication platforms, authors should make sure to choose a peer-reviewed or refereed journal.

Databases

Publishing articles in sources that are indexed in the internationally recognised databases [Web of Science](#) and [Scopus](#) (both subject to licence), leads to increased visibility.

These multidisciplinary databases guarantee high quality standards through the selection criteria for indexing journals, one requirement being peer review, and regular evaluation processes.

Journal rankings

(Scientific Journal Rankings SJRs)

Journal rankings represent the significance of a journal within its subject area and the prestige that derives from this.

These rankings can be lists compiled by academic institutions or by member voting. Because these evaluation methods are subject to distortion, many rankings are based on citation analyses.

The best-known annual journal rankings based on citation analyses are the [Scimago Journal & Country Rank](#) (freely accessible), which ranks the journals in the Scopus database, and the [Journal Citation Reports](#) (subject to licence), which rank the journals in the Web of Science Core Collection.

Journal metrics

Journal metrics are simple and readily available indicators for evaluating and comparing journals within a discipline. They are calculated using the ratio of a journal's citations to its publications.

The best-known metric is Clarivate's Journal Impact Factor, which is comparable to Elsevier's Cite Score. There are also journal metrics that take into account the typical publication and citation patterns in individual subject areas or particular aspects like the prestige of a journal.

Open Access

Open Access makes scientific research results freely accessible to researchers and a broader interested public worldwide. This promotes knowledge exchange worldwide and collaboration across geographical, institutional and disciplinary boundaries. Publishing in open access significantly increases the visibility of research achievements, whether through immediate Gold Open Access or subsequent Green Open Access publication

Many research institutions have various Open Access agreements with publishers and Open

Access publication funds in order to support researchers in publishing Gold Open Access. Most publishers have now adopted corresponding policies on Green Open Access, covering self-archiving or provision of so-called secondary publications (in repositories, for example), which are also easy to find with the help of tools such as Sherpa/RoMEO. This is an important measure to increase visibility, especially for publications that may originally only have appeared in print, like articles in anthologies.



Discoverability

Open Access publications are generally much easier to find, as, in the best case, search engines and other text and data mining tools index the full text of a publication and make it searchable.

Repositories

Repositories are servers, usually operated by universities or research institutions, on which scientific materials (publications, digitised objects/resources, research data, software, metadata, etc.) are archived and usually made freely accessible worldwide without a login barrier.

Standards such as unique identifiers, permanent links and certain long-term archiving formats ensure interoperability, sustainability and reusability.

There are various types of repository:

- [Institutional repositories](#) contain the output of an institution, such as a university, and can be actively used by all members of the institution.

- [Subject-specific repositories](#) offer content (publications, research data) on a specific subject area or discipline.
- [Open Access repositories](#) have freely-available content with an Open Access licence and no login requirements.
- [Publication repositories](#) contain full texts of publications and their associated metadata.
- [Software repositories](#) contain software (often open source).



Note

Specialised search engines can carry out comprehensive searches for repositories. Examples include [OpenDOAR](#) for Open Access repositories and [re3data](#) for research data repositories. The initiatives behind these repositories aim to promote the free movement of information to and within repositories across institutions and countries and to increase their visibility.

Current Research

Information Systems (CRIS)

A CRIS (referred to in German as a FIS) is a database in which an institution continuously documents its research activities such as publications, (externally funded) projects and other output. They are based on software that is either open-source, commercial or developed by the institution itself.

As a university bibliography, a CRIS provides an overview of an institution's academic achievements and supplies data for reporting and analysis purposes (intellectual capital statements, evaluations etc.).

An institution's own portal based on such a database helps to make both individual scientists and the entire institution more visible to the wider public through corresponding indexing in leading search engines. A CRIS can also serve as a data source for related websites (institute websites, for example) and other systems and platforms (like [ORCID](#)).



Note

A CRIS usually contains metadata that describes the existing content in a structured way. It can also be used as a kind of repository to store full texts and research data. However, a CRIS is not designed for long-term archiving.

Unambiguous Affiliations

In the context of research, the term “affiliation” refers to researchers belonging to one or more research organisations.

Correctly specifying an affiliation ensures that academic publications and research achievements are attributed to the right researchers and their institutions and increases their visibility.

Academic institutions implement affiliation policies, setting out guidelines for the standardised specification of affiliations and also containing further recommendations for authors, such as ensuring a uniform spelling of their name and creating identifiers. Persistent identifiers, such as an ORCID iD (Open Researcher and Contributor

ID), also enable research results to be correctly attributed to authors and should be stated during the publication process in addition to the name and affiliation.

Affiliation guidelines, which are usually in German and English, describe the procedures for correctly specifying the affiliation and are available on the research institutions’ websites.

Determining an academic institution’s research output is of great importance for the institution’s internal research documentation. Correctly using a standardised spelling of the affiliation helps guarantee the documentation’s accuracy.



Note

Standardised naming of the affiliation and unique identification (see Persistent Identifiers) is helpful for easier identification of publications when collating the research achievements of scholars and their institutions in databases, enabling complete citation analyses and evaluations.

Persistent Identifiers



Digital Object Identifier (DOI)

for digital objects ensure that they can be found in the long term even if their storage location changes

Digital Object Identifiers (DOI) have established themselves as the standard for scientific publications and research data, while Handle and Uniform Resolve Names (URN) offer technically equivalent solutions. They ensure that a publication is permanently accessible via a stable link and thus is still findable, even if its location (Uniform Resource Locator [URL]) has changed. Numerous platforms and publishers assign DOIs as

standard for publications and datasets. Funding bodies also require their use for the publication of project results. DOIs are also frequently used for bibliometric analyses (publication analyses, altmetrics, etc).

The DOI should be included in every available form of a publication. Including the DOI when distributing an article via social media is particularly important to maximise the publication's visibility.



ORCID iD

The ORCID iD has become a standard identifier for researchers.

Accurate identification of researchers is critical, as the correct attribution of scientific publications to their authors is of central importance for researchers' academic careers. It is also vital for the identification of an institution's research output. The attribution of publications to their authors is prone to errors for various reasons, such as name similarities and ambiguity (especially in the case of common names), name changes (e.g. through marriage), name variations, different spellings (such as Meyer,

Myer, Meyr, Meier, Meijer, Mayer, Maier, Mayr, Mair), or foreign language characters (such as å, ã, ç, ë, ð, ø, ô, š)

Creating and maintaining an ORCID profile contributes significantly to the correct attribution of publications and the visibility of their authors, as does adding the ORCID iD to every publication and entering it when uploading publications to platforms such as ResearchGate or Open Access repositories.



Research Organization Registry (ROR ID)

The ROR ID has become established as a unique identifier for institutions, such as universities and research establishments.

Using an ROR ID makes it easier to correctly identify an affiliation, even if an organisation has changed its name, has the names of benefactors in its title or has merged with or been taken over by another organisation. ROR is licenced under CC0 and used, amongst other things, to register DOIs with DataCite and Crossref.

If you are an author and need to indicate your affiliation, you can enter the ROR ID. Funding organisations, such as the FWF, can also be clearly identified by a ROR ID. The ID number can be quoted in the acknowledgements of third-party funded publications. Funding organisations can also use the Crossref Funder ID or the Crossref Grant ID.

RIS SYNERGY

Persistent Identifiers

RIS Synergy establishes data exchange between IT systems of funding organisations and research institutions. The key to this is process optimisation via technical interfaces and well-defined data flows, aiming to improve data quality and freeing up resources on all sides. RIS Synergy contributes to the sustainable digitalisation of the Austrian higher education sector. This poster explains the significant value of persistent identifiers for the RIS Synergy project and the scientific community, and how PIDs work in general.

PIDs in a Nutshell

What? PIDs are a persistent and unique reference to a digital, physical, or abstract resource.

Why? PIDs help to identify, verify and locate resources.

How? PIDs can be registered for people, organisations, research activities and publications, and are connected to a set of metadata describing the resources.

PIDs in RIS Synergy

Funding organisations and research institutions collect information on research, such as funding calls, projects, research funding, publications, researchers, or organisations. In order to aggregate, enrich and exchange this information via data interfaces, and to ensure high data quality, it is crucial to be able to uniquely identify these entities. Persistent identifiers (PIDs) are key to this.

The RIS Synergy consortium conducted a survey about the use of PIDs by the project partners, and researched the sustainability, connectivity and international coverage of PIDs. The results of the survey show that not all partners use all PIDs, and that there is no broad coverage even for well-established PIDs. RIS Synergy implements a range of PIDs for research information, and is committed to promoting PIDs in Austria and being a proactive player in future PID developments.

RIS Synergy focusses on PIDs for persons, organisations, grants and publications:

PID for persons: ORCID ID

The ORCID ID is a persistent identifier for persons. It is commonly used by researchers and issued by the non-profit, community-driven organisation ORCID. The ORCID ID is provided for free under the premise that it is owned and controlled by the researcher. Austrian funding organisations strongly promote the use of ORCID, as the ID is in many cases mandatory for funding applications. Universities are partly members in the ORCID Austria Consortium. They also include ORCID in research information systems and use ORCID to improve data quality. Registering an ORCID ID and maintaining an ORCID profile is on a voluntary basis for researchers. The RIS Synergy metadata standard for projects includes an ORCID ID to uniquely identify principal investigators.

PID for grants: Crossref Grant ID

The Grant ID is a persistent identifier for research grants. It is issued by the non-profit, community-driven organisation Crossref. Funding organisations can register Grant IDs with Crossref. Funding organisations in RIS Synergy are currently implementing a registration of Crossref Grant IDs in 2022. The RIS Synergy metadata standard for projects includes the Crossref grant ID.

PID for organisations: ROR

ROR stands for Research Organization Registry. It is a persistent identifier for organisations that is open source and non-profit, and was launched in 2019. Although ROR is a relatively new PID in comparison to others, it is a future-oriented PID that has been taken up by a large number of organisations already. A large part of the RIS consortium partners already use ROR. Currently, the metadata model of ROR is capable to capture organisations but not their sub-units. RIS Synergy aims to proactively engage with the community and work with other stakeholders to improve the data model and include sub-facilities in ROR.

PID for publications: DOI

The DOI - Digital Object Identifier - is a PID that is provided by the International DOI Foundation, a community-driven non-profit organisation. The DOI system was already introduced in 2000 and is well established. Not only are DOIs widely used by the RIS Synergy partner institutions, but the majority of universities are actively using the DOI Service Austria and other services to obtain DOIs for publications.

The PID Ecosystem

The PID ecosystem shows the relationship between various essential components of the research landscape. PIDs enable the linking of these components and therefore allow for an accurate depiction of research processes, including the projects, publications and affiliations of researchers.

Researchers

ORCID

Organisations

RINGOLD
ROR
ISNI
Crossref

Projects & Funding

RA ID
Crossref

Publications

doi
isbn

FAIR Data Management

The FAIR Data Principles are a set of guidelines for handling (research) data. They state that data should be **Findable**, **Accessible**, **Interpretable** and **Reusable**. Persistent identifiers play a key role in FAIR data management and are therefore explicitly mentioned in the FAIR principles.

FI: (Meta) data are assigned globally unique, persistent identifiers.

PIDs are essential to remove ambiguity in the meaning of every entity in the research life cycle, and allow data to be findable as well as interoperable across different systems.

Find more information on the FAIR principles here:

CLUSTER FORSCHUNGSDATEN

www.forschungsdaten.at

Fig. 1: Erat, V., Fürst, E., & Puttinger, J. (2022). *RIS Synergy: Persistent Identifiers*. Zenodo. (CC BY 4.0)

Academic Search Engine Optimization (ASEO)

Search engine optimisation (SEO) is a strategy used in online marketing to improve the findability of websites and documents by search engines. Commercial websites have been using SEO on a large scale for years. Academic search engine optimisation (ASEO) relates specifically to scholarly texts. It aims to provide researchers with the best possible support in finding re-

sults relevant to their search queries and help authors achieve a better ranking for their publications in search engines and databases. The elements to be „optimised“ include the wording of the title and abstract, the choice of keywords and the provision of comprehensive metadata.



Title optimisation

| DOs | DON'Ts |
|---|--|
| <ol style="list-style-type: none">1. Use meaningful titles Make sure to include the most important terms and the conclusion of your research.2. Important terms up front Position the most important words at the beginning of your main title.3. Think in search terms Would you use the terms in the title to search for your article?4. Make it succinct Short titles are easier to identify and more likely to be cited. Consider the display on mobile devices. | <ol style="list-style-type: none">1. Avoid creative main titles Save catchphrases, funny remarks and quotes for the subtitle.2. Avoid special characters Hyphens, suspended hyphens, asterisks, slashes and the like impair the search function.3. Don't use abbreviations If you use abbreviations, clarify them in the subtitle or abstract.4. Don't exaggerate Follow the guidelines for good academic practice, and don't overstate your results. |



Keywords and abstract optimisation

| Keywords | Abstracts |
|--|---|
| <ol style="list-style-type: none">1. Use thesauri MeSH, Emtree or other subject-specific thesauri can help you choose a keyword.2. Narrow vs. broad terms Alternate between specific and broader terms that make it easier to identify the topic.3. Use the singular form When choosing a keyword, use it in its singular, uninflected form.4. Perspective of a searcher Would you use this keyword if searching yourself?5. Indicative terms Give information about the content, not the result. | <ol style="list-style-type: none">1. Short sentences Write clearly, precisely and succinctly. Don't use overly flamboyant language.2. Important terms up front Position the most important words at the beginning of your abstract.3. Use synonyms Improve your chances of being found by using a variety of terms.4. Write informatively State your claims, methodology and results.5. Repeat keywords Repetition is a way to increase a publication's ranking and show the focus of the article. |

Dissemination of EU project outputs

The European Commission offers a variety of free services to support your dissemination and exploitation activities:

Open Research Europe platform

An Open Access publication platform for academic papers for beneficiaries of Horizon 2020 and Horizon Europe, including open peer review and revision of articles.

Horizon Results Platform

A platform where you can present your research results, find collaboration opportunities and take inspiration from other people's results.

Horizon Results Booster

Free consultancy services, including a portfolio dissemination and exploitation strategy, business plan development and support for your market launch.

European Standardisation Booster Service for EU Projects

An initiative supported by the HORIZON-WIDE-RA-2021-ERA-01 European Research Area call for proposals and managed by REA).

Supports Horizon Europe and H2020 projects that contribute to standardisation in Europe and beyond.

Innovation Radar

An initiative that identifies high-potential innovations based on data-driven methodology and supports EU-funded researchers and innovators to reach the market with their innovations.

Quelle: https://rea.ec.europa.eu/horizon-europe-dissemination-and-exploitation_de

Academic social networks

In recent years, networks similar to social networks have been established for scientists, such as Academia.edu and ResearchGate. These networks offer the opportunity to network, interact with other professionals, and exchange publications if this is legally possible. As they are usually commercially orientated and require registration and the disclosure of personal data, they are not considered Open Access platforms or repositories.

Publications find their way into ASNs through automatic searches and aggregation of scientific literature and its metadata, as well as through co-authorship. This automatically creates online profiles for researchers, which are often incomplete and sometimes redundant as they are not curated. It is worthwhile to search for your own profile in these networks and, if necessary, to „claim“ and curate it.



Note

One criticism of these networks is that by using them, you are supplying commercial operators with personal data, which they analyse for advertising purposes. Many of these networks finance themselves through personalised advertising, by advertising job offers and through sponsored posts.