

Preprints in Helmholtz

Helmholtz-Gemeinschaft
Helmholtz Open Science Office

15.03.2023

Preprints in Helmholtz

Warm-up...

Ergebnis des Warm-ups

Was beschäftigt Euch beim Thema Preprints?

Mentimeter



Preprints on the rise...

- **Preprint:** „...is a complete scientific manuscript that an author uploads on a public server for free viewing. Initially it is posted **without peer review**, but may acquire feedback or reviews as a preprint, and may eventually be published in a certified peer-reviewed journal.“ (europemc.org)

- **Preprints = Open Science Tool**

„...earlier sharing of ongoing work would allow more open and earlier feedback, bringing transparency to the scientific process and opportunities for collaboration within the community“ (Puebla et al.)

„The posting of preprints on **public servers** allows almost immediate dissemination and scientific feedback early in the publication process.“ (europemc.org)

„...allow the communication of new findings to the research community in a **more timely manner** ; contribute to the **reduction in wasted research** by signaling ongoing research projects, **avoiding duplication** and potentially **fostering collaborations**.“ (Besançon et al.)



Source: Wikimedia Commons, Thomas Shafee (adapted)

Preprints on the rise...

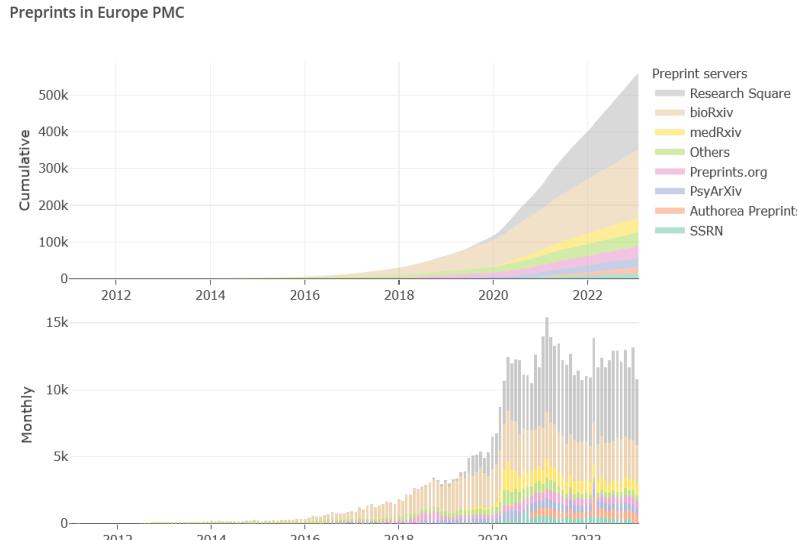
"The urgent threat of a global pandemic has **catapulted the use of preprint servers as a means of quickly disseminating scientific findings into the public sphere, supported by funding bodies encouraging preprinting for COVID-19 research**" (Fraser et al.)

"...there is little doubt that preprint publishing is **here to stay**. The question is **how science will handle it**. [...] We are down a pathway of open science, and that pathway is **going to accelerate**"
[...] "Our choice is **not whether** it occurs or not, our choice is **whether it occurs responsibly.**" (Watson)

"...use of preprints in these disciplines has **increased steadily**, including an explosion during the COVID-19 crisis [...] **adoption** of preprints will continue, driven by **greater familiarity** with preprints across different research communities and the **increased integration with publishers.**" (Puebla et al.)

Preprints on the rise...

Mehr Preprints → mehr Server → mittlerweile fast alle Domänen → Nachhaltigkeit?



Providers

- OSF Preprints (55,871)
- AfricaRxiv (414)
- AgriRxiv (426)
- ArabRxiv (328)
- arXiv (1,324,848)
- BioRxiv (43)
- bioRxiv (48,109)
- BodaRxiv (114)
- Cogprints (283)
- CoP (3)
- EarthRxiv (1,755)
- EcoEvoRxiv (940)
- ECSEarXiv (256)
- EdarXiv (1,180)
- engRxiv (2,088)
- FocDs Archive (53)
- Frenxiv (148)
- INA-Rxiv (16,554)
- IndiaRxiv (148)
- LawRxiv (1,366)
- LUS Scholarship Archive (310)
- MarRxiv (456)
- MedRxiv (211)
- MetaRxiv (487)
- MindRxiv (291)
- NutriRxiv (84)
- PaleoRxiv (224)
- PeerJ (4,747)
- Preprints.org (21,880)
- PsyArXiv (27,748)
- RePEc (848,335)
- SocArXiv (12,353)
- SportRxiv (386)
- Thesis Commons (1,922)

Subject

- Architecture
- Arts and Humanities
- Business
- Education
- Engineering
- Law
- Life Sciences
- Medicine and Health Sciences
- Physical Sciences and Mathematics
- Social and Behavioral Sciences

arXiv bioRxiv SSRN EGUsphere

OSF PREPRINTS

Create your own branded preprint servers backed by the OSF.

Check out the open source code and our public roadmap. Input welcome!

<https://europepmc.org/Preprints>

<https://osf.io/preprints/discover>

Preprints in Helmholtz

Agenda für den Austausch

- 1. Sind Preprints bereits ein Thema im Zentrum?**
- 2. Workflows und Best Practices**
- 3. Qualitätssicherung und Reputation**

Sind Preprints bereits ein Thema im Zentrum?

Preprints on the rise... im eigenen Zentrum?

"...visibility, feedback and credit for the authors, [...] possibility to add new results and refine the interpretation of the findings as the research progresses, via the posting of subsequent versions..."
(Puebla et al.)

"...advent of preprint servers has brought about a change in citation behavior. For instance, researchers who no longer need the publication of papers from publishers for their career may **skip the review process and no longer publish in journals of publishers...**"
(Nishioka et al.)

"Preprints are frequently touted as tools to promote the work of early-career researchers, many of whom see this form of publication as a **rapid and easy way to showcase their developing work**"
(Teixeira da Silva)

"...publishing for early career scientists, enabling a more liberal exchange of information, giving researchers the ability to timestamp a discovery and to show productivity under the constraints of limited funds or time..."
(Donahue et al.)

Preprints

on the rise... im eigenen Zentrum?

- Sind Preprints aktuell ein Thema im Zentrum?
 - Fragt die Wissenschaft nach?
 - werden Diskussionen geführt? Wer ist involviert?
 - existieren bereits Angebote (Beratung, Nutzung eigenes Repository, etc)?
 - Sind Angebote geplant?

Workflows und Best Practices

Preprints

Workflows und Best Practices

Zentren-Repositorien / -Publikationsdatenbanken

- Nachweissysteme für Publikationen
- Grundlage für internes / externes Reporting
- Schaufenster nach außen (bspw. integrierte Publikationslisten)
- interne Kommunikation (zugangsbeschränkte Liste)

- als **Nachweissystem** extern gespeicherter Preprints? (Nur bibliographischer Nachweis
+ externe Verlinkung)
- als Preprint-Server mit direktem Upload?

Preprints in Helmholtz Repositorien

Workflows und Best Practices



Ten Recommended Practices for Managing Preprints in Generalist and Institutional Repositories

1. Offer a step in the submission process for authors to provide information about other preprint versions, accepted manuscripts, published versions, and external peer reviews
2. When this information is available, indicate that there is related content in the repository metadata record using “dc:relation” field or “isIdenticalTo”, “isVersionOf”, “isPreprintOf” or “hasReview” and include the PID of the external resource
3. When the information is available, link to related versions and external peer reviews on the landing page of the preprint
4. For each new version of a preprint in the repository, assign a unique PID and include a version number that represents their updates sequentially
5. In addition to versions and reviews, enable authors to link to other related resources such as data, code or other associated outputs
6. Ensure preprints are integrated into domain and preprint discovery and indexing systems
7. Clearly indicate in the metadata record and on the landing page that the document is a preprint, working paper, or other domain specific term
8. Include a text banner on the landing page of the preprint that informs readers that the document is a preprint
9. Clearly indicate on the landing page or on the repository website what type of moderation or screening processes has been applied to the preprints
10. If a preprint has been removed, retain the metadata and a landing page (tombstone page) that designates its status as “withdrawn”

Linking
Versions

Discoverability

Editorial
processes

Preprints

Workflows und Best Practices

Praktische Fragen:

- Wer erfasst bereits Preprints? Wie?
- Wer plant eine Erfassung?
- Textakquise / Autor:innen-Ansprache?
- Genehmigungsprozesse?
- Aktualisierungen?
- Tracking der Historie / Verlinkung von Versionen und Zuständen?
- Einzeleintrag für alle Versionen oder Mehrfacheinträge pro Version? (Preprint, Postprint, Version of Record)?
- PID-Vergabe?
- Lizenzen?
- ...

Preprints

Workflows und Best Practices - Praxisbeispiele HGF

DESY - PUBDB

This screenshot shows a preprint record from DESY's PUBDB. The record is titled "Probing the weak mixing angle at high energies at the LHC and HL-LHC" by Amorolo, S., Chiesa, M., Del Pio, C. L., Lipka, K., Piconi, F., Vazquez, F. (Corresponding author), Violini, A. The record was created on 2023-03-01 and last modified on 2023-03-03. It includes a persistent identifier [10.3204/PUBDB-2023-00999] and a report number DESY-23-028. The abstract discusses measurements of neutral current Drell-Yan production at large invariant mass scales to test the energy scale dependence of the electroweak mixing angle. The potential of future analyses using proton-proton collisions at $\sqrt{s} = 13.8 \text{ TeV}$ in the Run 3 and High-Luminosity phases of the LHC is explored. The record also lists keywords like electroweak interaction, mixing angle, dilepton, mass, electroweak interaction, radiative correction, CERN LHC-Fair upgrade, energy, high, higher-order, p.p. scattering, TeV, Drell-Yan process, renormalization, Weinberg angle, neutral current, scale dependence, Contributing Institute(s) 1. LH/CMS Experiment (CMS), Research Program(s) 1. 611 - Fundamental Particles and Forces (POF4-611) (POF4-611), Experiment(s) 1. No specific instrument, and appears in the scientific report 2023. The record is available in various formats: PDF, PDF (PDF), OpenAccess, and XML. It also includes a review section with a star rating of 5 stars and a status of "Not yet reviewed".

Linking Versions

FZ Jülich - JuSER

This screenshot shows a preprint record from FZ Jülich's JuSER. The record is titled "Reliable cell retention of mammalian suspension cells in microfluidic cultivation chambers" by Schmitz, J., Stute, B., Feuerher, S., Kohlheyer, D., von Lieres, E. (Corresponding author), Grünberger, A. The record was created on 2022-01-05 and last modified on 2022-01-05. It includes a persistent identifier [10.1101/2022.01.05.475060] and a report number DESY-22-028. The abstract discusses reliable cell retention of mammalian suspension cells in microfluidic cultivation chambers. The record lists contributing institute(s) 1. Biotechnologie (IBG-1) and research program(s) 1. 2171 - Biological and environmental resources for sustainable use (POF4-217) (POF4-217). The record appears in collections like Dokumenttypen > Berichte > Vorabdrucke and Institutssammlungen > IBG > IBG-1. It is marked as Open Access. The record was created on 2022-01-05 and last modified on 2022-01-05. The editorial processes section includes options for OpenAccess (PDF, Extern link: Fulltext by OpenAccess repository), document review (Bisher nicht rezensiert), and personalization (Zum persönlichen Korb hinzufügen, Author List with IDs BibTeX (UTF-8), EndNote XML, EndNote Text, RIS, MARC, Print MARC, MARCXML, DC, Request correction, Submit fulltext).

Discoverability

Editorial processes

Qualitätssicherung und Reputation

Preprints

Qualitätssicherung und Reputation

Qualität (+ und -):

“...opportunity for authors to get **early feedback** from a **wider range** of researchers and incorporate the suggestions received to enhance the quality of the publication...” (Besancon)

“...**two-thirds** of these preprints are eventually published in peer-reviewed journals.” (Fraser)

“...**minimal screening** on preprints (and the fact that norms for data sharing with preprints are still developing) creates situations in which preprints **may represent incomplete disclosures** [...] despite heightened interest around scientific work, the public is largely unfamiliar with the iterative and collaborative nature of the scientific process” (Puebla et al.)

“...one of the primary **concerns** among authors around posting preprints is premature media **Coverage**...” (Fraser)

“...preprints have been **misused**, notably regarding **communication with the general public**. Indeed, various news outlets and also scientists have **used** these non peer-reviewed articles as **scientific evidence**, increasing the **impact** of potentially **inaccurate findings**. ” (Besancon)

“... risks of, or problems associated with, allowing preprints to be hosted [...] and indexed [...] giving them equivalent intellectual and citation status as peer-reviewed papers...” (Teixeira da Silva)

Preprints

Qualitätssicherung und Reputation

Reputation:

“... a solid percentage of published papers that were preceded by preprints garner higher altmetric scores than papers that were published without taking the preprint route...” (Teixeira)

“Preprints may also increase a researchers' visibility and help in credit attribution...” (Besancon)

“... visibility, feedback and credit for the authors...” ; “...preprints to be considered in research assessment frameworks as evidence of productivity, separately from the publication venue...”
(Puebla et al)

“...new developments such as the growing prevalence of preprint publication and the use of social media to disseminate preprint findings are pushing the boundaries of our current understanding of kairos in scientific discovery.” (Koerber)

“...authors should be allowed to cite preprints to maintain a more accurate citation of their sources.” (Smart)

Preprints

Qualitätssicherung und Reputation

Haltung der Zentren?

- Preprints = „Publikationen“?
- Existieren Richtlinien die den Umgang mit Preprint-Veröffentlichungen regeln?
- Ist geregelt, ob Autor:innen Preprints auf externen Servern hochladen dürfen?
 - Wie wird sichergestellt, dass Preprint einem gewissen Qualitätsstandard entsprechen, um möglichen Schaden abzuwenden?
 - ist ggf. die Öffentlichkeitsarbeit involviert?
- Wenn Upload in eigener Infrastruktur:
 - existiert hier ein Workflow zur Qualitätssicherung? Wer genehmigt?
 - existieren Workflows zum Umgang mit Versionen
 - wie wird die Nachvollziehbarkeit sichergestellt?
- Wie wird mit letztlich nicht in Journals veröffentlichten Preprints umgegangen?
 - ethische Fragestellungen zum Umgang mit Retractions
 - Kennzeichnung im eigenen Repository
- ...

Preprints

Genutzte Literatur:

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Dialog

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Vielen Dank für Ihre Aufmerksamkeit!

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