

Using metadata: who, how and why



What do we mean when we talk about Crossref metadata?

By the numbers

97,080,534

Registered content records

67,197,039

Records with full-text links

10,303

Member organizations

2,839,354

Records with funding information

2,091,477

Records with a Funder Registry ID

30,936,433

Records with licenses

1,504,076

Records with ORCID IDs

6,986,703

Crossmark count

2,200

Registered retractions through Crossmark

82,919

Registered updates through Crossmark

Members —> Crossref



Basic metadata: titles; author names; ISSNs/
ISBNs, abstracts, references

Funding Information, Funder identifiers,
award numbers

License Information, License URIs
Full-text URIs (e.g. for text mining)

Crossmark: updates, retractions, corrections
ORCID iDs

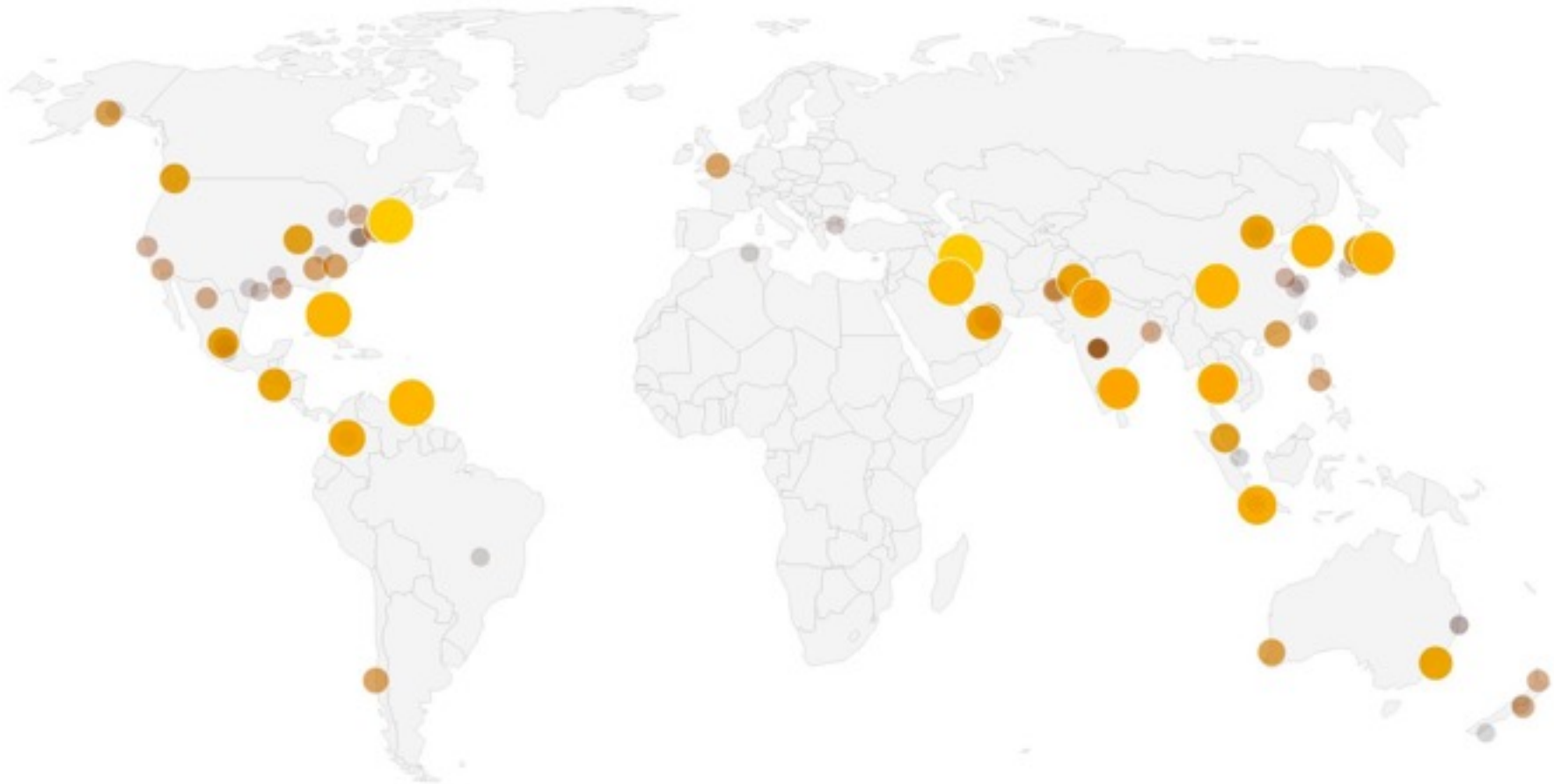
Recently: Peer Review reports, relations

Soon... Organization IDs, Grant IDs, etc...



**Crossref metadata for
machines & humans**

Web searches



Search the metadata
of **97,736,436** journal articles,
books, standards, datasets & more

[Search help](#)

Search **17,549** funders connected
to **2,135,345** published works with
funding data

MINISTÉRIO DA EDUCAÇÃO

TYPE

 Journal Article (257)

YEAR

 2017 (100)

 2018 (80)

 2016 (37)

 2015 (29)

 2014 (5)

 2013 (3)

 2009 (2)

 2012 (1)

PUBLICATION

 Physical Review D (8)

 Physical Review Letters (5)

 Water Research (4)

 Biological Conservation (3)

 Biomass and Bioenergy (3)

 Experimental Gerontology (3)

 SORT BY: **RELEVANCE** PUBLICATION YEAR

[↓ DOWNLOAD AS CSV](#)

PAGE 1 OF 257 RESULTS

Synthesis, structure, morphology and stoichiometry characterization of cluster and nano magnetite

Journal Article published Aug 2016 in Materials Chemistry and Physics volume 178 on pages 182 to 189

Research funded by Coordenação de Aperfeiçoamento de Pessoal de Nível Superior | Ministério da Educação

Authors: L. Herojit Singh, S.S. Pati, Edi M. Guimarães, P.A.M. Rodrigues, Aderbal C. Oliveira, V.K. Garg

<https://doi.org/10.1016/j.matchemphys.2016.05.003>

Actions

Injuries in Dutch elite field hockey play

Journal Article published 27 Feb 2018 in Scandinavian Journal of Sports Medicine volume 50 issue 2 on pages 1708 to 1714

Research funded by Coordenação de Aperfeiçoamento de Pessoal de Nível Superior | Ministério da Educação (0832/14-6)

Authors: S. Delfino Barboza, J. Nauta, M. J. van der Pols, W. van Mechelen, E. A. L. M. Verhagen

<https://doi.org/10.1111/sms.13065>

Actions

Impact of different detection criteria on caries estimates and risk assessment

Journal Article published 5 Jan 2018 in International Dental Journal volume 68 issue 3 on pages 144 to 151

Cite

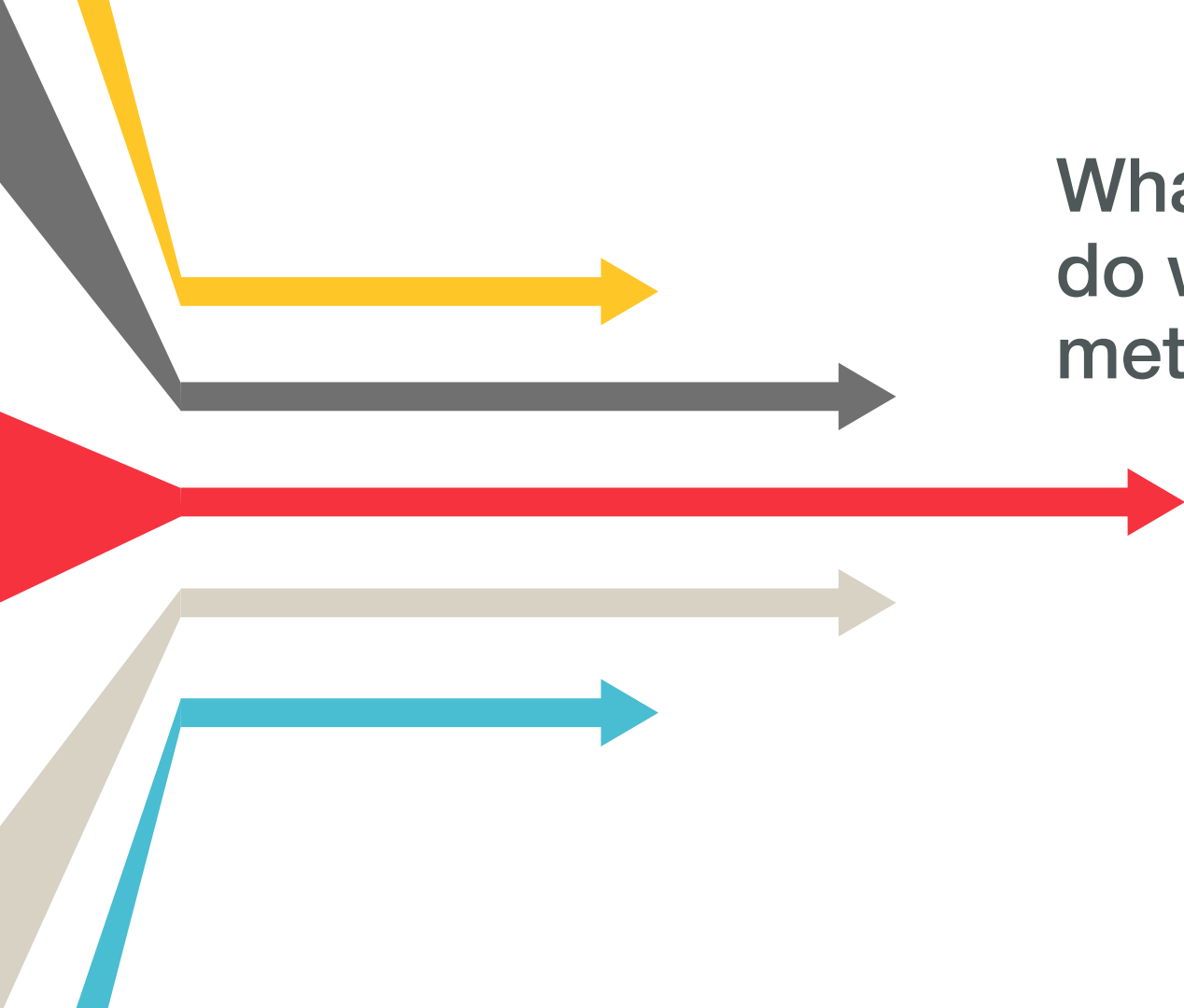
Filter on this publication

Metadata as JSON

Port study

Science in Sports volume 28 issue 6 on pages 352 to 357

What do people
do with Crossref
metadata?



Metadata for discoverability

- ORCID, Funder ID & Award No.
- Abstracts
- References
- Links to data & software
- Links to preprints
- Links to conference papers and posters
- Links to research resource IDs (identifiers for assays, materials, etc.)
- Links to post-publication events (reviews, comments & discussions, bookmarks, shares, recommendations, references, media coverage)
- Access indicators (publication license for text & data mining, machine mining URLs)

Metadata for research integrity

- Updates (corrections, retraction, update, expressions of concern, etc.)
- Peer review history, type, assets
- **Funding data** (COI)
- ORCIDs (authors, reviewers, editors, etc.)
- **Affiliation** (authors, reviewers, editors, etc.)
- **License data** (full text, abstract, etc.)

Metadata for reproducibility

- Updates (corrections, retraction, update, expressions of concern, etc.)
- **Funding data** (COI) & ORCID IDs (authors, reviewers, editors, etc.)
- **License data** (full text, abstract, etc.)
- Links to peer review assets
- Links to underlying data & software
- Links to protocols
- Links to versions
- Links to videos/audio and other supporting information
- Links to research resource IDs (identifiers for assays, materials, etc.)
- Links to clinical trial registry and trial number

Metadata for reporting and assessment

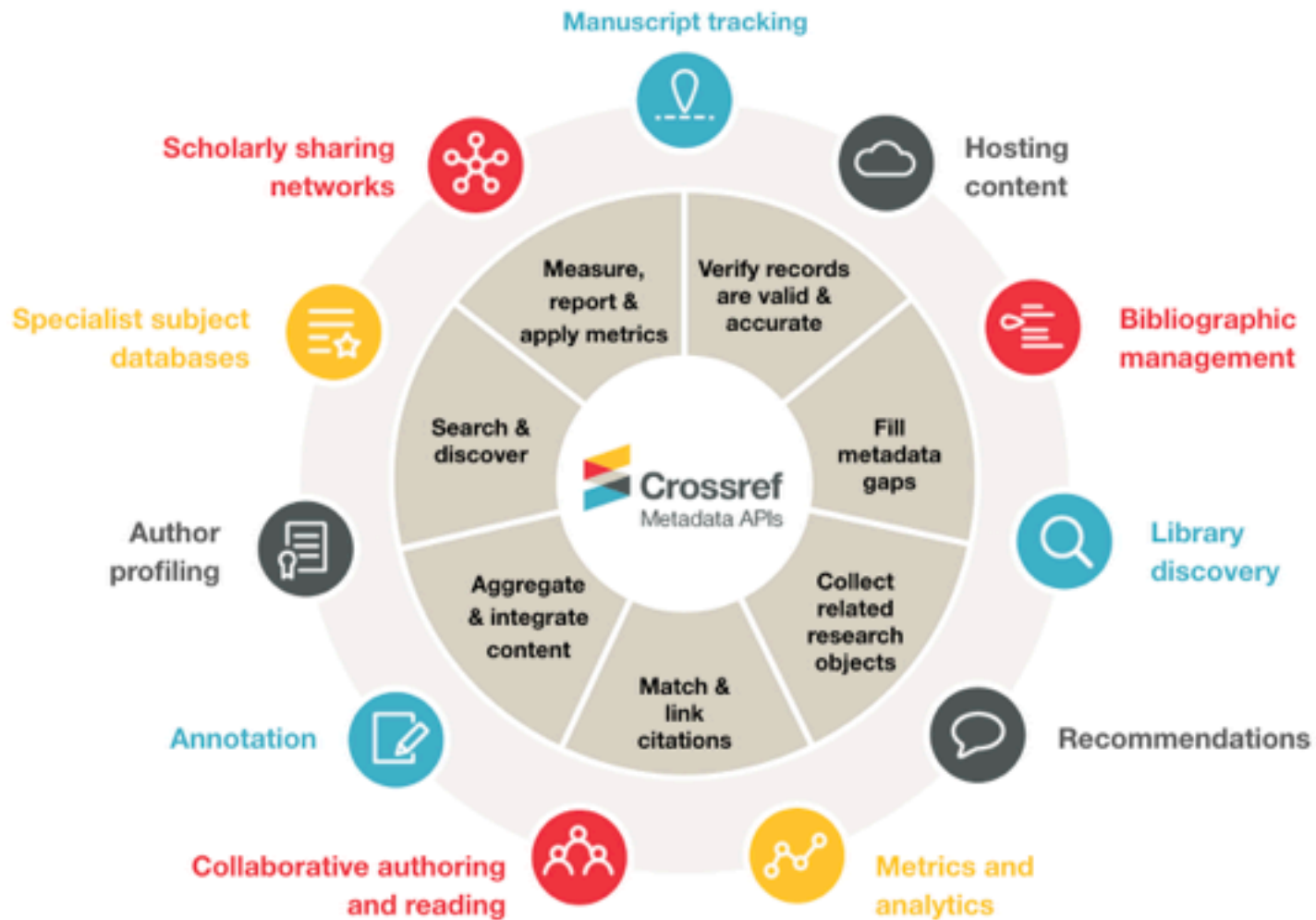
- ORCID, Funder ID, Grant ID & Award No.
- **Abstracts**
- **References**
- Peer review description & assets
- Links to data & software
- Links to preprints
- Links to conference papers and posters
- Links to research resource IDs (identifiers for assays, materials, etc.)
- Links to post-publication events (reviews, comments & discussions, bookmarks, shares, recommendations, references, media coverage)
- **Access indicators** (publication license for text & data mining, machine mining URLs)

“We would love to see rights-declaration metadata. This is invaluable to know whether it’s public domain or copyrighted, and any constraints for use.”

Cynthia Hudson-Vitale,
Digital data librarian in Research Data and GIS Services at
Washington University in St. Louis Libraries and
visiting program office for SHARE



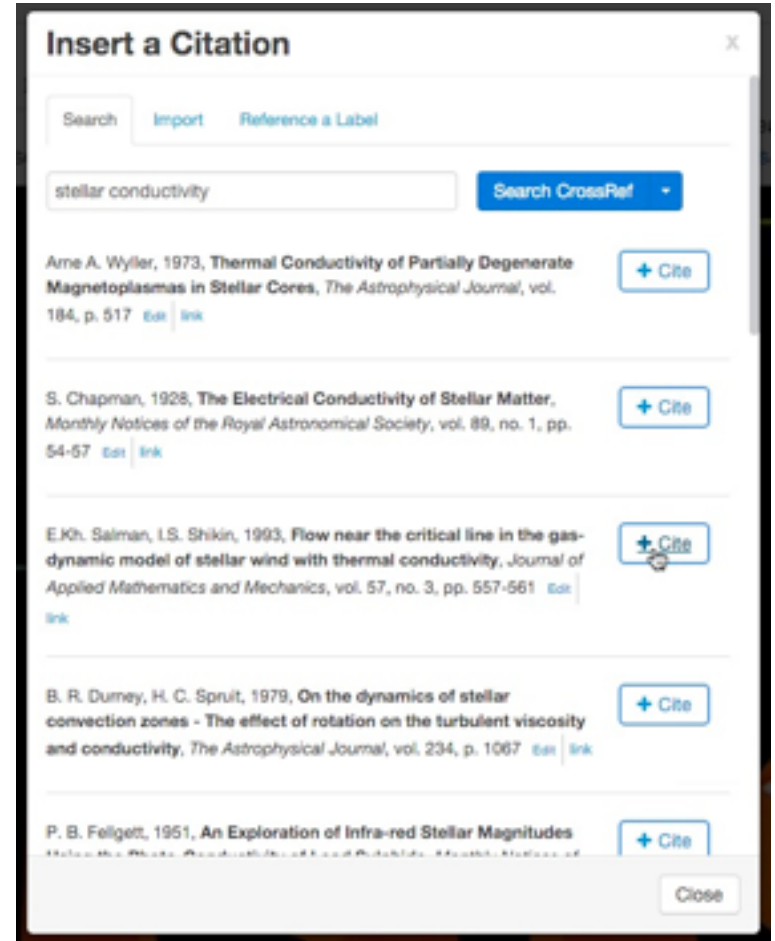
Who else uses
Crossref metadata?





A collaborative writing tool

Built a tool based on
Crossref metadata to allow
authors to search and cite
without leaving the editor.



Initiative for Open Citations

The Initiative for Open Citations **I4OC** is a collaboration between scholarly publishers, researchers, and other interested parties to promote the unrestricted availability of scholarly citation data.

632 million

metadata queries per month

+28% over last year

Crossref REST API overview

- Search, filter or sample metadata from thousands of members
- Returns results in JSON
- The information is continually updated
- The REST API helps unlock the value metadata; making it available to query easily and to integrate into other tools and services
- No sign-up is required and the data can be treated as facts from members. Therefore it is not subject to copyright and available to use for whatever purpose
- Simplifies access for researchers who want to mine and analyze research outputs and content

Metadata API Plus: New in 2018

XML
OAI-PMH



JSON
REST API*

- Metadata 'snapshots'
- Metadata normalized across interfaces
- Priority support
- Guaranteed uptime
- Higher rate limit
- Notifications
- *Also has a free public interface

Crossref metadata helps research
to be found, cited, linked-to,
assessed, and re-used



Thank you!

Documentation available: <https://api.crossref.org>

