Curation Update

Carolyn Grant and the ADS Team

ADS Users Group Meeting, 19-20 Nov. 2020

Search by Affiliation Update

- Background
  - Years of affiliation data cleanup, normalization, assigning IDs

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Search by Affiliation Update

- Background
  - Years of affiliation data cleanup, normalization, assigning IDs
  - Filter by institutions enabled Jan. 2019

ads

QUICK FIELD: Author First Author Abstract Year Fulltext All Search Terms

Start New Search

inst:"U Toronto"

Your search returned **35,918** results

AUTHORS
COLLECTIONS
REFEREED
INSTITUTIONS

- U Toronto 35.9k
  - U Toronto 20.8k
  - Dep Phy 8.4k
  - CITA 2.9k
  - Dep Ast Astrop 2.6k
  - Dunlap Inst 884

more

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1 2021NIMPA.98564661A 2021/01 cited: 2
The MATHUSLA test stand
Alidra, Maf; Alpigiani, Cristiano; Ball, Austin *and 23 more*

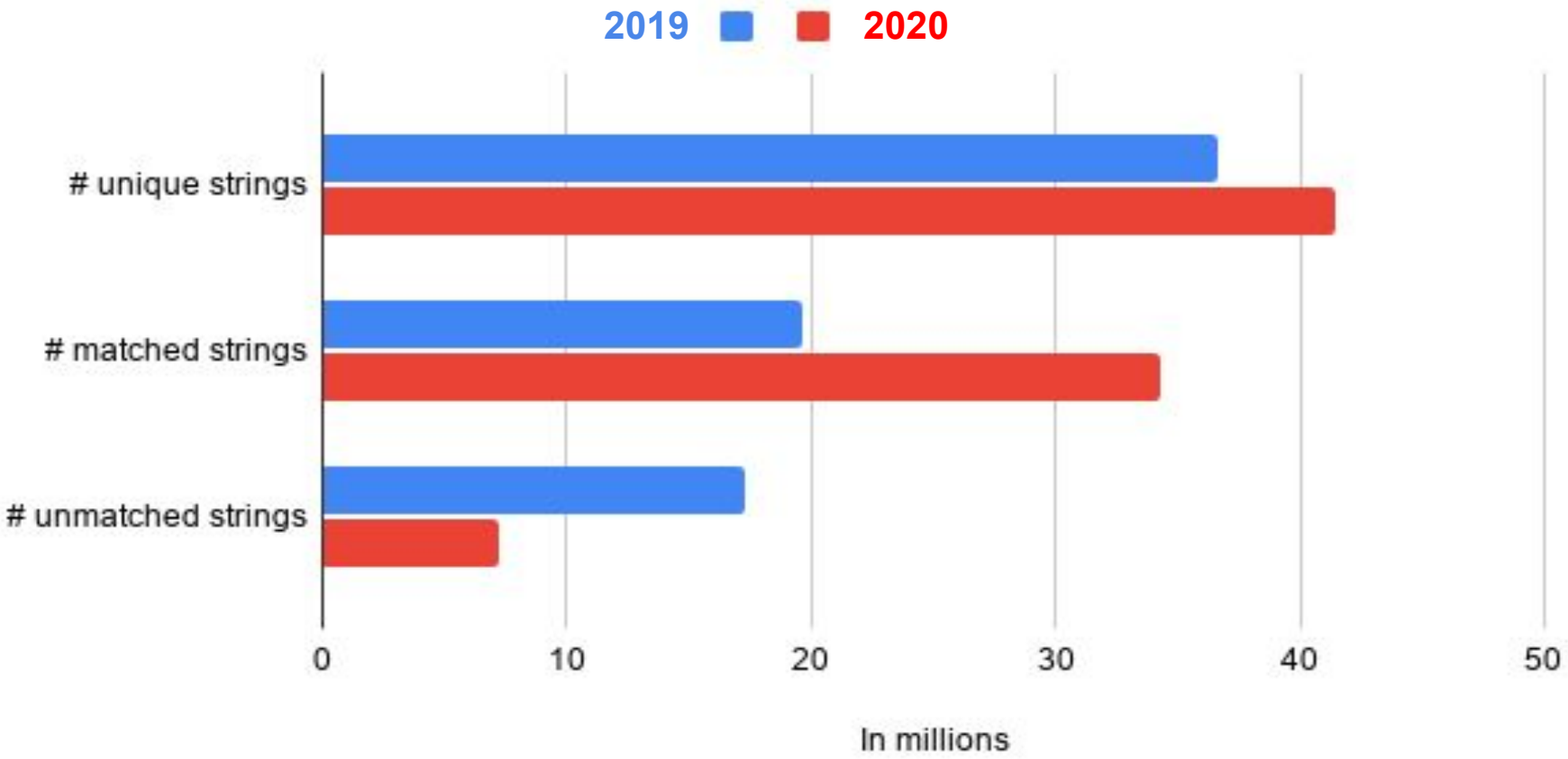
2 2021JDE...271..280E 2021/01
Solvability in the sense of sequences for some fourth order non-Fredholm operators
Efendiev, Messoud; Vougalter, Vitali

3 2020NucFu..60l6030D 2020/12
Manipulation of E×B drifts in a slot divertor with advanced shaping to optimize detachment
Du, Hailong; Guo, H. Y.; Stangeby, P. C. *and 4 more*

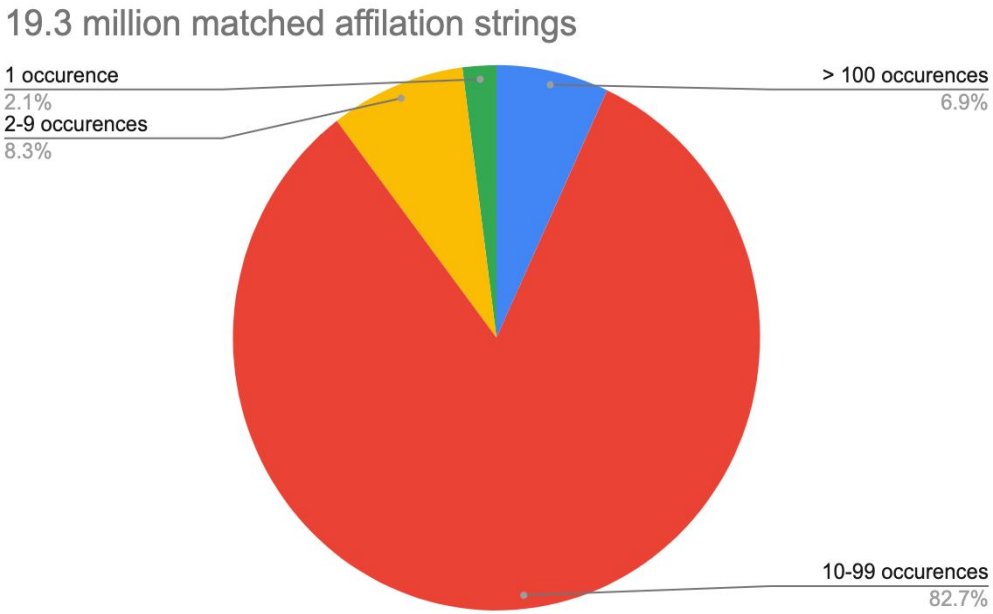
Search by Affiliation Update

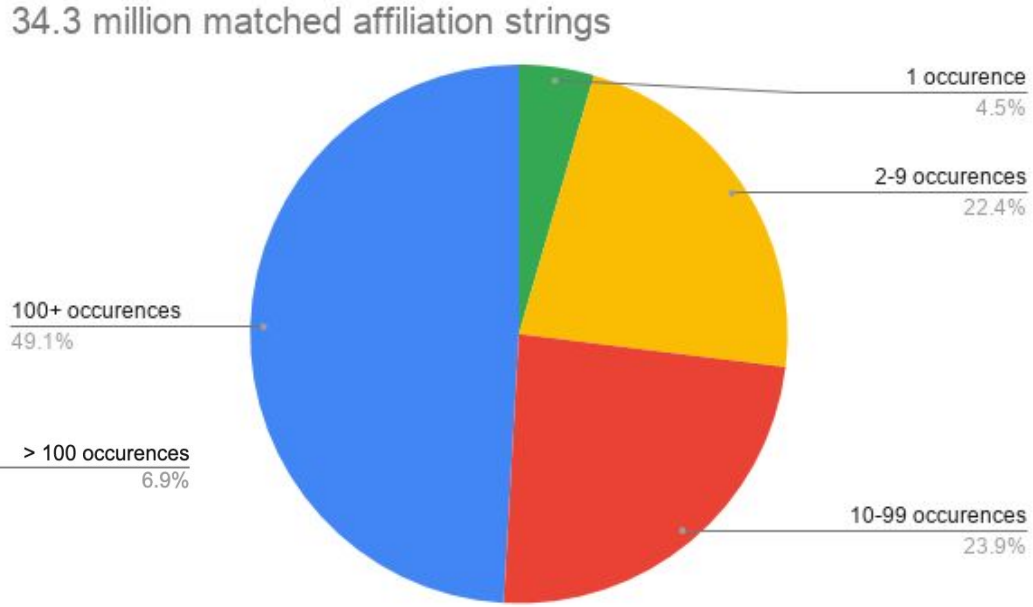
- Background
  - Years of affiliation data cleanup, normalization, assigning IDs
  - Filter by institution enabled Jan. 2019
- Update of coverage
  - 10% increase in identified institutions (6400 -> 7000)
  - 14% increase in # unique strings (36.5 million -> 41.5 million)
  - 32% increase in # matched strings! (53% -> 88%)

Affiliation Strings



2019

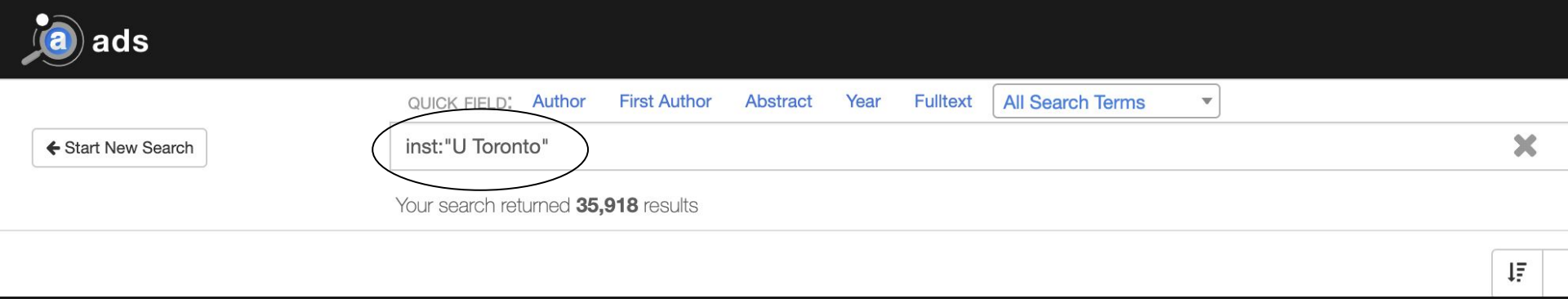

19.3 million matched affilation strings
1 occurence
2.1%
2-9 occurences
8.3%
> 100 occurences
6.9%
10-99 occurences
82.7%


34.3 million matched affiliation strings
1 occurence
4.5%
2-9 occurences
22.4%
100+ occurences
49.1%
10-99 occurences
23.9%

2020

Search by Affiliation Update

- Background
  - Years of affiliation data cleanup, normalization, assigning IDs
  - Filter by institution enabled Jan. 2019
- Update of coverage
  - 10% increase in identified institutions (6400 -> 7000)
  - 13% increase in # unique strings (36.9 million -> 41.5 million)
  - 30% increase in # matched strings! (53% -> 83%)
- Integration with ROR (Research Organization Registry)
  - Community-led effort for assigning unique IDs to every research org
  - Helping drive the effort to resolve to department-level
  - https://ucd-library.github.io/ror-extend-demo/details.html


ads
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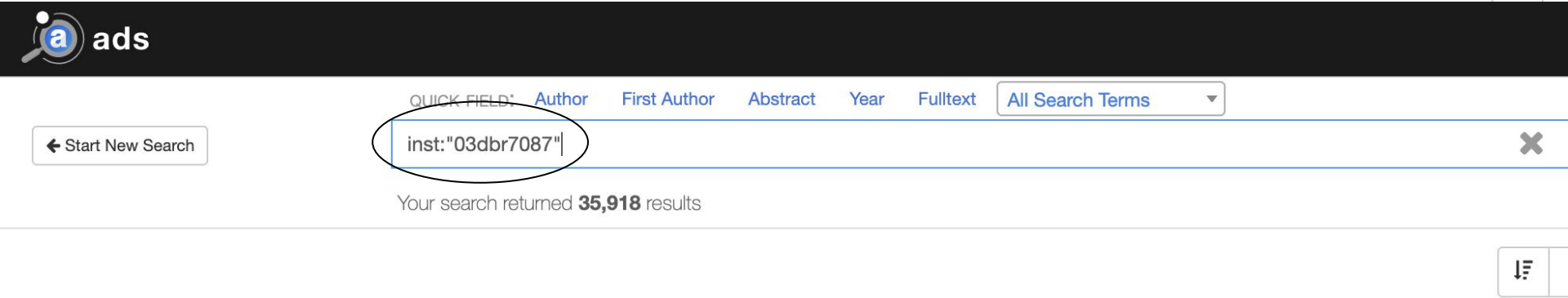
inst:"U Toronto"
Your search returned 35,918 results


ads
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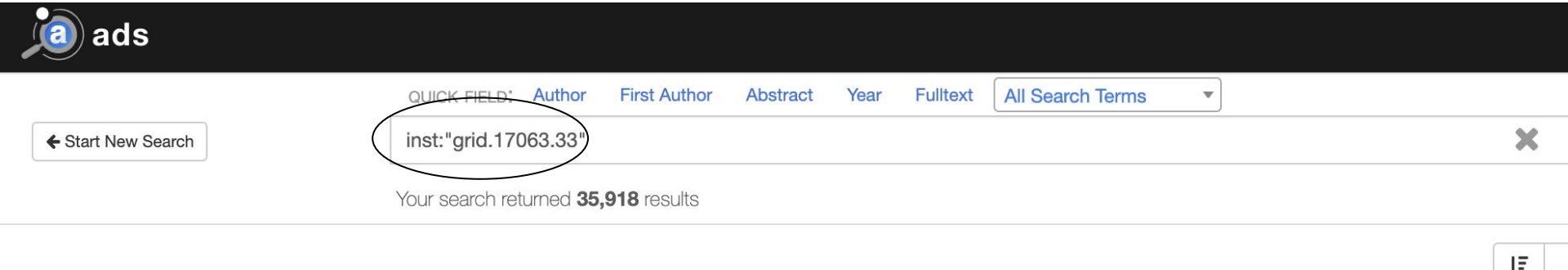
Your search returned 35,918 results


ads
QUICK FIELD: Author First Author Abstract Year Fulltext All Search Terms
Start New Search
inst:"grid.17063.33"
Your search returned 35,918 results

Breaking Dependencies on Classic

1. Data extraction

2. Data collection

3. Data indexing

4. Data storage

Breaking Dependencies on Classic

1. Data extraction

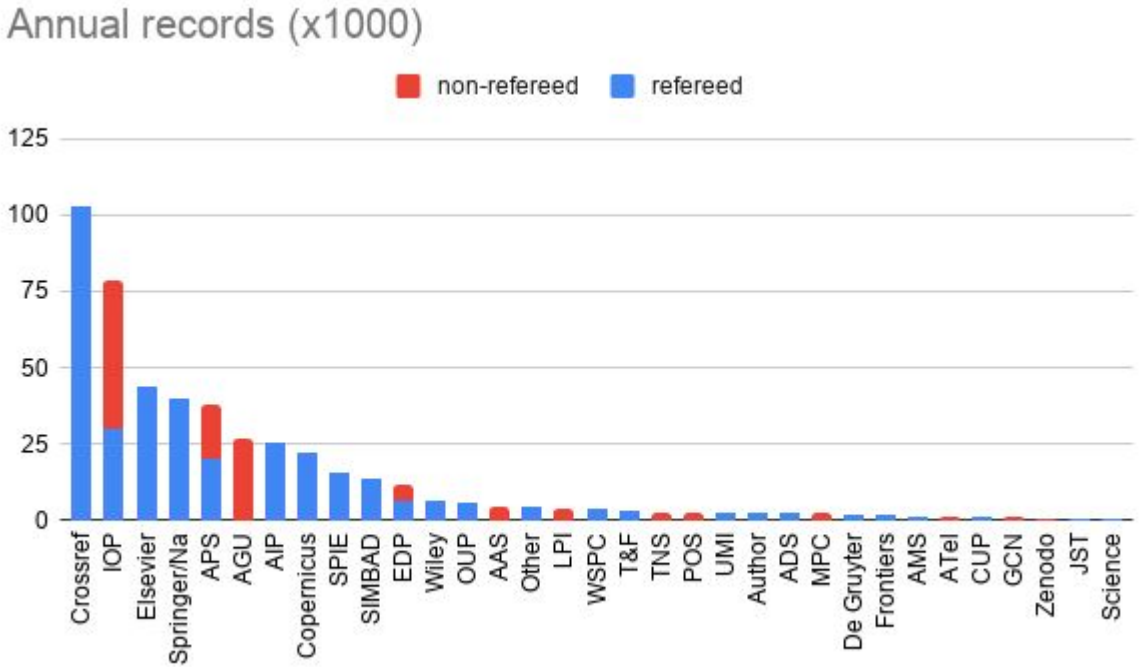
- **The data**
  - Annually ~500K records, 10-12 million citation pairs
  - Data from multiple sources
  - Need validation before input
  - Matching existing records (tmp -> pub; arxiv -> pub; SIMBAD)
  - Enabling smaller journals and conferences by keeping format simple
- **Porting legacy code from perl to python**
  - Approximately 40 versions of input formats
  - JATS - about 12, but not all JATS are equal (most already ported)
  - Springer/Elsevier/Wiley non-JATS
  - Crossref basic data, could possibly improve via API

Pyingest more configurable, reusable library of parsers

Annual records per publisher

There is not a direct relationship between the number of records per publisher and the difficulty of processing the data or the importance of including the journal. Other considerations include:

- Importance to the field
- Quality/depth of the data
- Amount of handwork



Breaking Dependencies on Classic

2. Data collection

- **Harvesting**
  - Weekly harvest from 8-10 sources
  - Dependence on adsftp problematic
- **External links**
  - Decoupled from the rest of the metadata
  - No validation
- **References and full text**
  - Decoupled from the rest of the metadata
  - Flat file storage tied to bibcodes

Breaking Dependencies on Classic

3. Data indexing

- **Tied to weekly curation workflow**
  - Higher cadences currently not supported
  - Preprint matching slows down physics update
- **Expand direct ingest**
  - Arxiv ~750/day
  - Astronomy ~300/day
  - Physics ~3000/day
- **Break dependency on bibcode**
  - Increase early content
  - Facilitate new content
  - Simplify including non-standard content

Breaking Dependencies on Classic

4. Data storage

- **Storage deeply entwined with classic architecture**
- **Define a new storage system**
  - Storing: bib data, ref data, full text data, usage data, link data
  - Updating: tracking changes, deletions, provenance. Auto vs. manual
  - Editing: single vs. batch changes; bib vs. non-bib data
- **Define a new data model**
  - Ease of validation with schema
  - No longer dealing with purely bibliographic data (e.g. software and data products)

First steps in Modernizing Curation Workflows

- Best Practices
  - Curation task force meeting regularly
  - Designing curation framework based on data requirements
  - Version Control for all curation code
- Feedback Forms
  - Old feedback forms disabled
  - New forms using API to generate content from the database
  - More robust and increased functionality (author ordering, ORCID)

Journals Database Update

- Summary
  - Central storage for ADS Journals holdings data
  - Specialized holdings information for ADS Curators and external users (e.g. librarians)
  - Reference sources, fulltext holdings, journal histories (publisher, volume/issue availability, etc)
  - Replacement for some Classic curation and indexing data
- Current Status
  - Working on record histories & update triggers
  - Pipeline deployment container in development
- To do:
  - Curator interface via external application (Google Sheets or equiv)
  - API for external queries

Thank you!

Carolyn Grant and the ADS Team

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