

Learn to Use Dimensions

Introduction to the Dimensions Database

1/25/2022

Webinar Structure and Notes

- **Webinar Content:**

- Approximately 1 hour of content
- Q&A time to follow
- Example exercises: Finding a list of publications fitting search criteria, Analyze geographic tweet distribution using altmetrics, analyzing past citation data

- **Webinar Notes:**

- Please remain muted with video off
- Questions can be submitted through the chat feature and will be addressed in real time or during breaks
- Should major tech issues arise, please keep an eye on your email, we will reach out as quickly as possible to attendees via email

Accessing Dimensions

- Navigate to <https://app.dimensions.ai/>
- Click “Log in” in the upper right corner
- Enter your bu.edu email address (only bu.edu emails are supported for the BU subscription)
- Log in via your BU Kerberos user name and password
- Fill out the registration information requested by the site

What is Dimensions

- Dimensions is an online bibliometric database managed by Digital Science
- The database contains a wide selection of item types including publications, datasets, grants, patents, clinical trials, and policy documents
- The item types serve as the fundamental units for the database
- Additionally Dimension can link funding sources to scholarly output, enabling analysis other platforms lack
- As with other online sources funding data is not comprehensive, and should be used with care

What is Dimensions: Scope

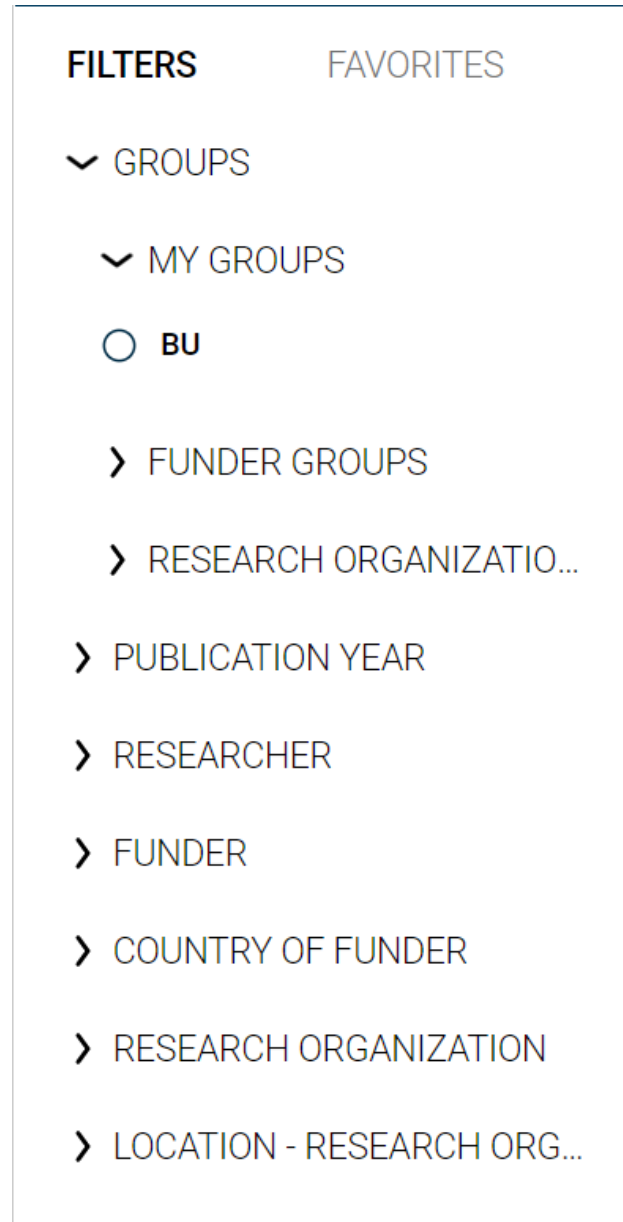
- Data is drawn from a wide range of publishers and public data sources
- Some other databases and publication sources can be used as search filters (i.e. you can filter by “PubMed Publications”)
- The database is larger in terms of item count (~124 Million published items) and more diverse in item type than many other data sources
 - Contains items dating back to the 1600's
 - Item count is greater than SciVal, but SciVal is a more robust data source for current publications

What is Dimensions: Notes

- Discipline assignment is done via machine learning algorithm to assign based on item content
 - Attempts to eliminate bias from the nominal discipline of the publishing journal in the discipline assignment of the item
- FCR and RCR metrics are available via dimensions
 - FCR: Field Citation Ratio, shows citation performance relative to similar aged publications in the same field (by FoR code). Calculated for all Dimensions publications more than 2 years old. Similar to FWCI in SciVal
 - RCR: Relative Citation Ratio, show citation performance relative to other publications in its area of research (defined by publications cited alongside it). Calculated for all PubMed publications at least 2 years old

How to Search in Dimensions

- Dimensions provides a wide range of search functions via dropdowns on the left side of the screen
- Search filters have “limit to” and “exclude” functionality
- Additionally, custom groups and entire searches can be saved for repeated use

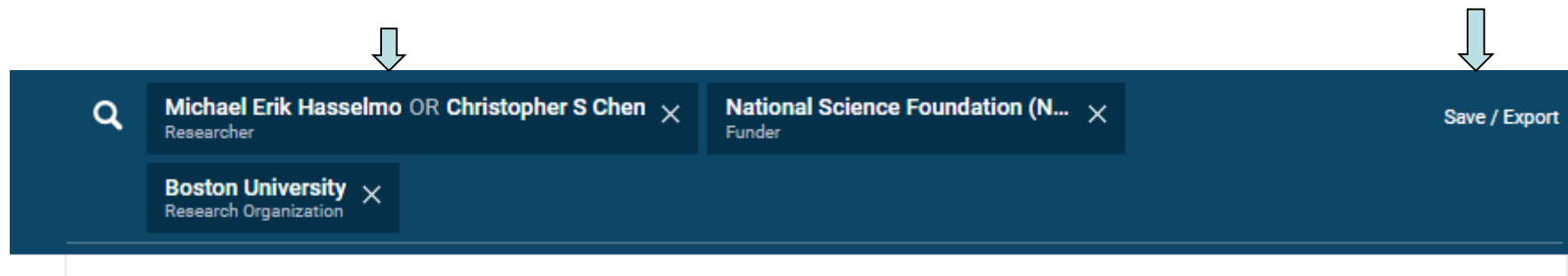


How to Search in Dimensions

- Selecting multiple search items of the same type simultaneously (i.e. two researchers) will create an “OR” function
- Selecting different item types (i.e. a researcher and a funder) will create an “AND” function
- Use caution, as it is easy to accidentally create conflicting search terms or filter out desired results
 - Start with minimal numbers of filters and add more as needed
 - Be careful with too many items employing “AND” logic, you may need to delete a search term and recreate it

“OR” logic created by selecting two researches in the same search term

Option to save the entire search query



This search will look for all items authored by either Michael Hasselmo OR Christopher Chen, that are funded by the NSF, and have BU as an affiliation


Main Results Window

- The main results window provides a list of all items fitting any existing search criteria, as well as maintaining a visual of the current search criteria
- Item details are shown, and items can be selected to see further details if available
 - Author List
 - References and Citations
 - Supporting Grants
 - Altmetric Overview

Main Results Window

Running counts
of matches to
search criteria







 e.g. plastic AND instrument Save / Export

PUBLICATIONS 124,544,776	DATASETS 11,183,660	GRANTS 6,115,921	PATENTS 141,964,218	CLINICAL TRIALS 683,246
POLICY DOCUMENTS 743,138				

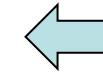
☒ Show abstract Sort by: Relevance ▾

Title, Author(s), Bibliographic reference - [About the metrics](#)

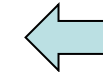
[Defining Training and Performance Caliber: A Participant Classification Framework.](#)
Alannah K A McKay, Trent Stellingwerff, Ella S Smith, David T Martin, Iñigo Mujika, Vicky L Goosey...
2022, International Journal of Sports Physiology and Performance - Article
Throughout the sport-science and sports-medicine literature, the term "elite" subjects might be one of the most overused and ill-defined terms. Currently, there is no common perspective or t... [more](#)

 77  Open Access  Add to Library 

[Substantial Improvement in Nontuberculous Mycobacterial Identification Using ASTA MicroIDSys Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry with an Upgraded Database.](#)
Junhyup Song, Shinyoung Yoon, Yongha In, Daewon Kim, Hyukmin Lee, Dongeun Yong, Kyoungw...
2022, Annals of Laboratory Medicine - Article
Identifying *Mycobacterium* using matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS) is challenging. We evaluated the performance of MALDI-TOF MS in



Running bar
showing all current
search filters



List of search
results and
some details

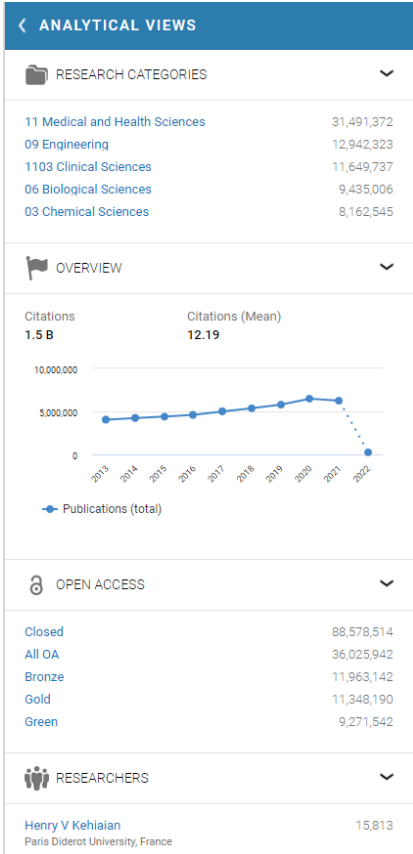
Break and Practice Exercise

- Exercise: Search Query Construction
- How many publications does Dimensions find that have Mark Grinstaff or Emelia Benjamin as an author, BU as an institution, and are funded by the NIH?
 - Skills: Constructing OR logic, constructing multiple search terms, analyzing basic search window results

Analytic Tools

- Dimensions also includes a set of more detailed data view in an expandable tab called “Analytical Views”
- This tab offers more detail breakdowns of metrics based on the current search criteria
- A wide range of options and filters exist within the analytical views

Analytic Tools



> ANALYTICAL VIEWS | PUBLICATIONS

RESEARCH CATEGORIES

OVERVIEW

OPEN ACCESS

RESEARCHERS

SOURCE TITLES

PUBLISHERS

FUNDERS

RESEARCH ORGANIZATIONS

PLACES

COMPARE

Research Categories
related to your search [About indicators](#)

Aggregated Bar Chart Timeline Heatmap

Publications | Citations | Citations (Mean)
Indicator
Mean | [Change](#)

Classification: Fields of Research [Export table](#)

Name Fields of Research code	↓ Publications	Citations	Citations mean
Medical and Health Sciences 11	31,491,372	539,016,375	17.12
Engineering 09	12,942,319	197,484,546	15.26
Clinical Sciences 1103	11,649,736	171,177,681	14.69
Biological Sciences 06	9,435,007	252,572,715	26.77
Chemical Sciences 03	8,162,544	188,243,498	23.06
Physical Sciences 02	6,319,319	105,427,586	16.68
Public Health and Health Services 1117	5,749,844	86,570,162	15.06
Information and Computing Sciences 08	5,620,739	63,016,068	11.21

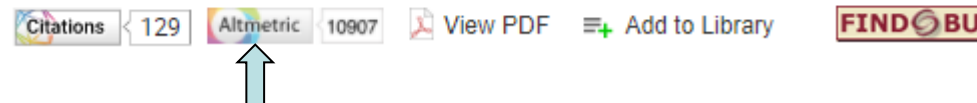
Altmetrics

- Some items (those with pertinent data) have a like to an altmetric page
- Altmetrics are alternative metrics that can be useful to look at the impact or exposure of an item in non-traditional ways
- These are beneficial as there are many ways scholarly work can have an impact beyond citation based metrics

[Scientific consensus on the COVID-19 pandemic: we need to act now](#)

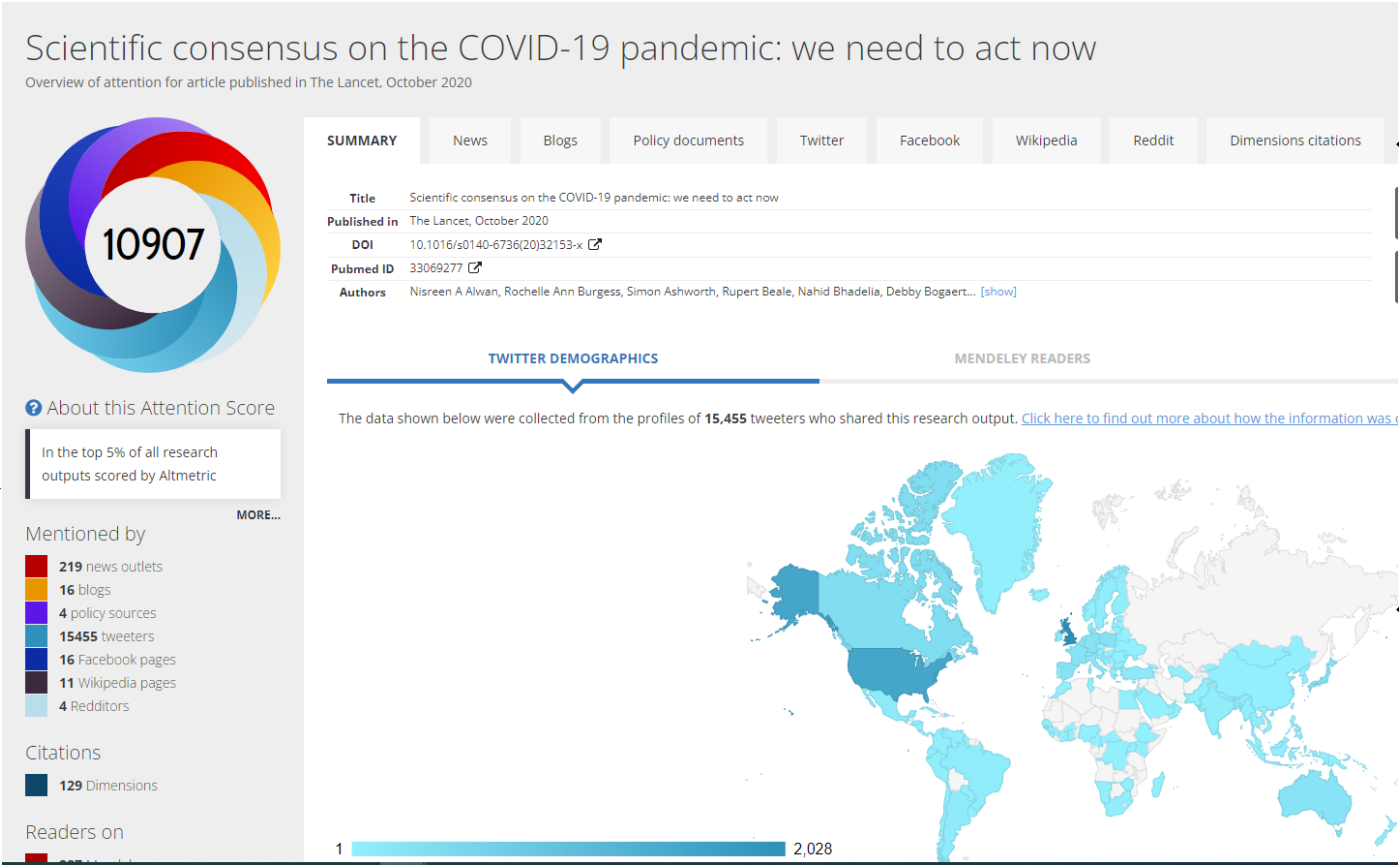
Nisreen A Alwan, Rochelle Ann Burgess, Simon Ashworth, Rupert Beale, Nahid Bhadelia, Debby Bogaert, Jennifer Dowd, Isabella ...

2020, The Lancet - Article



This button will be available if
an item has altmetric data

Altmetrics



Detailed views of various item mentions

Visual and numeric (outside of the screenshot) data on tweet geography

API Access

- Dimensions also has the ability to be accessed via api to use code to pull/scrape data
- Good news: this feature is supported by Dimensions and included as part of BU's subscription
- Bad news: we are only allowed 5 api access slots at a given time
 - Currently all 5 are in use
 - If you need api access for a research project, please contact Joe Farmer in the Office of Research at jpfarmer@bu.edu. Please include a brief summary of the project and the approximate timeline

Q&A

- Please put any questions you have in the chat
- Questions can also be emailed to jpfarmer@bu.edu
- The recording and slides from the webinar will be made available on the research support website. I will email out a link in a few days when the recoding is posted

Practice Exercises

- Exercise: Altmetrics
- What three countries are responsible for the most tweets regarding Kevin P Gallagher's paper with the highest altmetric attention score?
 - Skills: Search construction, accessing altmetrics, altmetric geographic analysis
- Exercise: Analytic View
- What is the median citation count for BU publications in the year 2017?
 - Skills: Search construction, assessing analytic view, analytic view options