

Guidance on using citation metrics to assess research groups or departments

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Overview

The [UCL bibliometrics policy](#) sets out some principles for the use of citation metrics in research assessment at UCL. As part of [the overall guidance](#), this paper sets out some general advice on how to use citation metrics for assessing the output of research groups or departments, and guidance on where to find those metrics.

When looking at units as a whole, it can be informative to look at aggregate metrics for all papers taken together, rather than citation data for individual papers. This gives a better sense of overall activity, and can help balance out the effects of outliers.

Where can we find appropriate metrics?

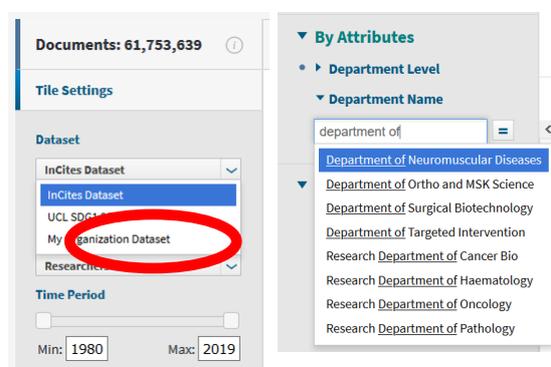
We recommend you use the InCites tool. This aggregates data from Web of Science, and is available to all UCL users. This walkthrough will focus on the InCites "MyOrganisation" data, which is derived from papers in RPS and structured around the internal UCL hierarchy. As of 2020, it includes all papers in RPS published between 2013 and early 2020.

InCites can be accessed through a link in the top bar of Web of Science, or else by going to <https://incites.clarivate.com>. It requires registration when you first use it – we recommend you use your UCL address here. You will need to be on the UCL network when you first register, so be sure to use a remote desktop or VPN if you are off-site.

MyOrganisation is designed to show papers grouped by internal UCL units. It is hierarchical, so for example the papers reported for Brain Sciences will include all papers from PALS, all papers from the Institute of Neurology, and so on. Papers are assigned to departments on the basis of their authors; a paper with an author from Engineering and an author from the Institute of Neurology would be assigned to both units. Author affiliations are drawn from the HR system, and each person is assigned to one and only one unit.

To get papers for a department or other research unit, select the "Organisations" button on the front page, and then, under "dataset" in the top right, select "My Organization Dataset". Scroll down to the "By Attributes" filter, and enter the department name - you can enter several units at once here if desired, and you will get a list for each one. Then click "Update Results".

You can now select what metrics to display for the units, using the "cogwheel" icon. We recommend selecting the "% documents in top1%" and top 10% (under "productivity") and "category normalised citation index" (under "impact"). Other metrics, such as the default "times cited", are less informative. Details on interpreting these metrics are given below.



When dealing with aggregated groups of papers, it can be important to decide whether to *exclude* any records. By default, InCites provides all publications, but often it is more useful to concentrate on key item types such as articles and reviews. In certain fields, conference proceedings may be more appropriate than articles/reviews; in others, it may be important to include books and book chapters, though InCites citation data on these is more limited.

If you wish to filter by item types, you can do this using the left-hand sidebar. It is probably better to select desired item types rather than filter out undesired ones, as InCites indexes a very large number of types of record. In most cases we would recommend articles, reviews, and possibly conference proceedings or book chapters.

Downloading lists for analysis

You can download the aggregate data, as displayed on the table, by using the download button next to “benchmarks” in the top right of the list. Graphs can also be downloaded using the corresponding button.

If you would like to access a list of all papers belonging to this unit, you can see it by clicking the number under "Web of Science Documents" in the data results on the right-hand side. Download it with the arrow icon on the top right of this list.

Search 3 results... Benchmarks

	Name	Rank	▼ Web of Science Documents	Category Normalized Citation Impact	% Documents in Top 1%
<input type="checkbox"/>	▶ Department of Neuromuscular Diseases	1	3,404	1.95	3.73%
<input type="checkbox"/>	▶ Department of Surgical Biotechnology	2	1,266	1.65	3.08%
<input type="checkbox"/>	▶ Department of Ortho and MSK Science	3	551	1.24	1.45%

Web of Science Documents

Documents Per Page

Article Title	Authors	Source	Research Area	Document Type	Volume	Issue	Pages	Publication Date	Ti C
Long-Term Effect of Gene Therapy on Leber's Congenital Amaurosis	Bainbridge, J. W. B.; Mehat, M. S.; Sundaram, V.; Robbie, S. J.; Barker, S. E.	NEW ENGLAND JOURNAL OF MEDICINE	MEDICINE, GENERAL & INTERNAL	Article	372	20	1887-1897	2015	:

Once you have this list downloaded, you can manipulate it in Excel to find details for individual papers, or to compare all of the papers from a person/unit. Bear in mind that not all the individual metrics quoted in the download are useful.

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number of types of record. In most cases we would recommend articles, reviews, and possibly conference proceedings or book chapters.

Interpreting the metrics

The key metrics we recommend you use for groups of papers are the Category Normalised Citation Impact, and the share of documents in the top 1% or 10%.

- **Category Normalised Citation Impact (CNCI).** This is a relative citation ratio, comparing the number of cites this paper has received to the mean of all papers in the same field, same document type, and same publication year. A CNCI of 1 is equal to the world average; the overall CNCI for most UCL publications is around 2, varying by subject area.
- **% of documents in top 1%/10%.** This gives the relative share of papers that exist in the top 1% or top 10% of comparable papers by citation count. The list of comparable papers is defined as those with the same field, same document type, and same publication year.

The CNCI and “top share”, taken together, can give a good sense of where a paper fits in comparison to the rest of the field. We recommend looking at both to help avoid anomalies – for example, a group of papers with a very high CNCI but a more normal-looking share of papers in the top 10% probably indicates that there is one or two very highly cited papers, and the rest are more in line with the field average.

For assessment of recent papers, it is important to bear in mind that the small number of citations involved can make statistics over a short period (the past 1-2 years) unreliable. In particular, for papers less than a year old, relative citation numbers can be very strongly affected by unrelated factors like the exact month of publication.

If you have not filtered by document type, be alert for individual anomalies. Including all records can produce problems for normalised metrics by introducing dramatic outliers – for example, documents classed as “editorial material” are very rarely cited. The vast majority will have zero citations, and the rare items that are cited will have improbably high normalised values – if the average is only one editorial in twenty being cited, then an editorial with just one citation can shoot up to a CNCI of 20, vastly more than most research articles will receive.

FAQS:

1. *Some key papers aren't in here!*

Not all papers are included in InCites. Generally speaking, it only covers papers that are indexed in Web of Science - if a paper is in RPS but not in Web of Science, it won't be imported. This most commonly affects things like conference papers and book chapters.

If the paper has been added to RPS very recently, it may take a while to show up as it has to be manually imported. We are aiming to update InCites regularly, but it does take time to process the data.

If the paper was added to RPS some time ago, and you would expect it to be covered in Web of Science, please get in touch (bibliometrics@ucl.ac.uk) and we can look into it.

2. This download includes the Journal Impact Factor and something called the "Journal Normalized Citation Impact" - what about those metrics?

We recommend you **do not** use these. The Journal Normalised Citation Impact shows how a paper compares to others in the same journal, not the field as a whole; this is not very informative. The Journal Impact Factor is an averaged measure of citations for all papers in the journal, and does not necessarily indicate anything about that one paper. Research England has strongly discouraged use of the impact factor for REF selection, and UCL has committed to not using it. See the [UCL Metrics Policy](#) for more information.