# CHARM-EU/TORCH BIBLIOMETRIC INFORMATION

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These applications, developed at UBICS, will allow you to obtain information about the research conducted in the group of universities that form the Alliance CHARM-EU/TORCH.

They are two interactive tool that access the information in a similar way.

- Torch Collaboration Networks: The first one focus in the collaboration among universities and filters according to disciplines and keywords
- Torch Publication Search: The second one looks at publications (do not need to be collaborations) that can be filtered by ISSN of the journals and by keywords.

### **Torch Collaboration Networks**

#### Search by university combinations

Data generated from OpenAlex database (coauthorship). Select two or more universities to see their collaboration networks.

 Universitat de Barcelona
 Université de Montpellier
 Universiteit Utrecht

 Trinity College Dublin
 Eötvös Loránd Tudományegyetem
 Åbo Akademi University

 University of Würzburg
 Ruhr West University of Applied Sciences
 University of Bergen

 Apply discipline or keywords filters
 Select disciplines or keywords to filter the results. Leave blank to search collaborations without filtering.

 Filter

Collaborations

#### UNIVERSITY COMBINATIONS

This information is collected from the **openalex.org** database. Click on the buttons for selecting any combination of universities, then you can apply filters by discipline, by keywords, and by years.

#### Search by university combinations

Data generated from OpenAlex database (coauthorship). Select two or more universities to see their collaboration networks. Universitat de Barcelona Université de Montpellier Universiteit Utrecht Åbo Akademi University Trinity College Dublin Eötvös Loránd Tudományegyetem University of Würzburg Ruhr West University of Applied Sciences University of Bergen Apply discipline or keywords filters Select disciplines or keywords to filter the results. Leave blank to search collaborations without filtering. Discipline 🛗 Add dates range See collaborations 俞

Discipline and keywords filters: when input is introduced a list of possible disciplines or keywords is shown. Multiple options can be selected. Once the selection is finished press the check button and proceed with the years range or directly to the "See collaborations" button.

| Keywords 🗸 | clima  | Discipline 🗸 |  |
|------------|--|--------------|--|
|            | <ul> <li>Climate model</li> <li>Temperate<br/>climate</li> <li>Homogenization<br/>(climate)</li> <li>Climate change<br/>mitigation</li> <li>Climate change<br/>adaptation</li> </ul> |              | <ul> <li>Multidisciplinary</li> <li>Agricultural and</li> <li>Biological Sciences</li> <li>Arts and</li> <li>Humanities</li> <li>Biochemistry,</li> <li>Genetics and</li> <li>Molecular Biology</li> </ul> |

## **Torch Publication Search**

#### Search by university

Data generated from OpenAlex database (coauthorship). Select at least one university.



This second application works in the same way as the previous one. The main difference lies in the fact that now a single university can be introduced and the filters are slightly different. Now one of the filters is the journal ISSN, that can be found in <u>portal.issn.org</u>, and the other corresponds to keywords.

## SEARCH RESULTS

Once the "Search" is done, and depending on the number of publications it will take more or less time, this information, for any of the two applications, will be returned to you:

| ↑ Hide query panel  |
|---|
| Results for the search query:   |
| https://api.openalex.org/works?filter=authorships.institutions.ror:https://ror.org/021018s57.concepts.id:htt  |
|   |
| https://api.openalex.org/works/inter=authorships.institutions.ror:https://for.org/051escj72,concepts.id.http  |
| https://api.openalex.org/works?filter=authorships.institutions.ror:https://ror.org/04pp8hn57,concepts.id:htt  |
|   |
| ✓ Coauthorship network <a>C</a>   |
| Institution Network 🖸 🤇 Interdisciplinarity chart 🗹   |
| 🛿 Funders statistics 🖸 🕹 Download .csv  |
| <ul> <li>Remove arXiv publications</li> <li>Remove arXiv duplicates</li> </ul>  |
| Max authors per publication: 14   |
|   |
| You can move the slider with the arrow keys or mouse wheel for a more precise selection.  |
| Since OpenAlex considers only the first 100 authors, those papers with more than 100 authors are not taken into account in our<br>analysis.   |
| For an optimal visualization even a further reduction in the maximum number of authors is recommened. Since the author merging procedure is computationally expensive, large data samples may produce timeout errors in the process of merging. |
|   |
|   |
| JICH COLLADORATORS: Universitat de Barcelona, Universite de Montpellier, Universiteit Utrecht, Trinity<br>Illege Dublin, Eötvös Loránd Tudományegyetem, Åbo Akademi University, University of Würzburg, Ruhr West                               |
| iversity of Applied Sciences, University of Bergen.   |

#### ↓ Show metrics info

- Search results: so that you can check what has actually been searched for, that can be edited and used for a new search through "Search again".
- "Coauthorship network": generates an interactive network of collaborations between the authors of the searched publications.
- "Author statistics": generates an interactive statistic of the publications and allows you to see the contributions of each author.
- "Funders statistics": generates a list of funding institutions and a histogram.
- "Concept network": generates an interactive network of concepts as defined in the OpenAlex database.
- "Institution network": generates an interactive network of institutions where authors of the publications are affiliated.
- "Download .csv": Allows you to download a .CSV text file without formatting, which can be immediately incorporated into an Excel or Word file, to easily generate reports, resumes, .....

- "Interdisciplinary chart": generates an interactive pie chart of disciplines as defined in CiteScore and in OpenAlex.
- arXiv duplicates can be removed (this is the default option looking for titles) or all arXiv contributions not being considered.
- "Metric info": Small window that can be shown and hidden that explains the metrics used. The
  indicators used are based on Citescore, but as there are articles published in 2023 and the year
  indexes have not yet been released, the data for these years are shown with the indicators of the last
  year available, in this case in 2022.<sup>1</sup>
- Max authors per publication: you can límit the number of authors of the publications shown (default is 100). We recommend to lower to around 10-20 for a good visualization of the networks.

And on the right, a list of publications with the following fields:

- TITLE
- AUTHORS
- JOURNAL
- DOI: with an immediate access to the publication in another browser window
- Citation count

Which are the same that are downloaded in the .CSV file. In addition, we have the bibliometric information of the journals:

• "Show journal info": detailed information on journal indicators (2022 and 2023 publications currently correspond to 2021 journal indicators).



## Statistics of the publications

If you go to this section now you will find complete statistics of the journals where the entire set of authors have published or you can select the authors individually. Number of publications per year, number of citations these publications have had, and quartiles (and 1st decile) if there is information about the journal in Citescore. Years without information are marked differentl

<sup>&</sup>lt;sup>1</sup> Citescore does not provide data prior to 2011.

## Coauthorship network



When entering this part of the application, a bar will appear that will allow you to set the minimum number of publications for an author to appear on the network, which you can change at will (the default value is 5). Once you have chosen the minimum number you can select or eliminate the authors you consider<sup>2</sup>. The network is interactive in determining the authors you want to appear but it is also interactive in positioning the nodes, which you can move if you want to other positions. With the Zoom you can zoom out or zoom in (the RESET ZOOM button will allow you to restore the initial perspective). Colors represent groups of autors and the shapes distinguish the universitites.

## Funders statistics



A list with the funding organizations will appear and a histogram with the contributions will show up in the right panel.

<sup>&</sup>lt;sup>2</sup> Hint: A reasonable minimum number might be 2 or 3 publications. Once this is done, do UPDATE and it will update your network. Now you can lower the minimum number again and new authors will come up which you can remove or select one by one. Note that consortia or large collaborations tend to mask the network.

## Institution network



The same than for the authors' network. Institutions can be selected and unselected by clicking the appropriate boxes. The minimal number of contributions to be represented in the network can also be chosen.

## Concepts network



The same than for the authors' network. Concepts as defined in the OpenAlex database, classified according to hierarchical levels. For each publication, the database provides a list of concepts at different levels and its significance. In this case we provide two filters, one for the minimal number of appearances of a concept and the other for the maximal level of detail in the classification. Level 0 is taken as the discipline level and so on.

## Interdisciplinary charts



Two interdisciplinarity charts. In the leftmost one, disciplines are considered in terms of the classification of the journals in CiteScore. In the rightmost chart, disciplines are extracted from the top-level concepts of the publication in OpenAlex. In both cases we provide two simple indices, the Gini-Simpson index, and the Shannon entropy, to "quantify" interdisciplinarity.<sup>3</sup>

<sup>&</sup>lt;sup>3</sup> Quantifying interdisciplinarity is a complex and unsolved issue in bibliometrics. For more information about these indices and further generalizations see ......