

Citagoras User Manual

Version 1.0.1

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1. Introduction

Citagoras is a tool to help students and researchers discover scientific articles by leveraging publicly available citation metadata and representing it in a way that can help streamline the literature discovery of users.

It was developed as part of a project towards a degree in computing and information systems at the University of London.

In this manual, certain terms are used which are clarified here:

Digital Object Identifier or DOI

This is a persistent identifier widely in use in academic circles to refer to scientific literature. This application relies heavily on them to identify and retrieve information for articles.

For more information on DOIs, please see https://en.wikipedia.org/wiki/Digital_object_identifier and <https://www.doi.org/>

Article

Any given scientific text which has a DOI, be it a journal article or a book chapter.

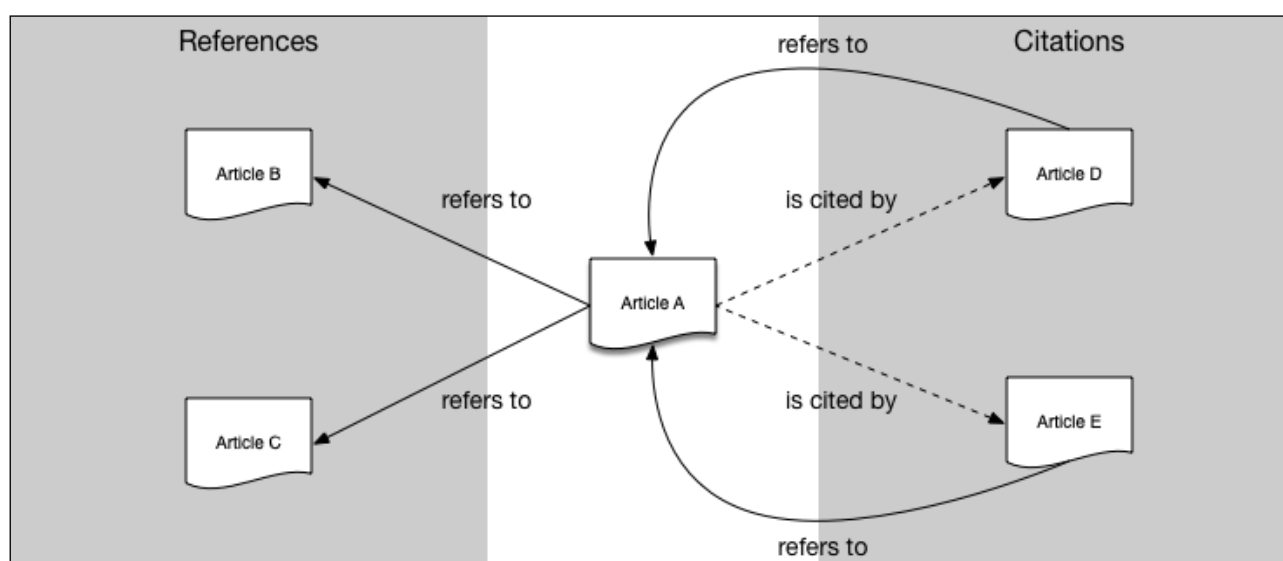
References

Any given scientific article has references to existing literature it used as sources. These are found in the bibliography of the article.

Citations

Any given scientific article is on its turn referred to or cited by other scientific articles. Citations can be thought of as the inverse relation of a reference.

In this illustration, the central article A refers to article B and C; article B and C are the references of article A.



Article A itself, is a reference by article D and E. It has been cited by article D and E. We'll refer to article D and E as citations.

2. Requirements

You will need a computer with a working internet connection to use this application.

Citagoras should run on every recent Linux distribution, macOS and Windows. It has been tested on following platforms:

OS	Version
Linux	Ubuntu 18.04, 19.04
macOS	10.11 (El Capitan), 10.14 (Mojave)
Windows	10 Pro Release 1809

This application communicates with two publicly online citation providers to retrieve scientific article information.

Provider	Web Site	Reason Connecting
CrossRef	https://www.crossref.org/	Retrieve article metadata such as title, author, etc.
OpenCitations	https://opencitations.net/	Retrieve citations and references

No personally identifiable information on your computer or your person is sent to them. The only information these public data providers see, are the requests for certain entries coming from an IP address associated at that time with your computer or Internet Service Provider.

Note: The current application distribution of Citagoras benefits of running it in full screen mode.

3. Installation

Citagoras is delivered as a stand-alone application. After downloading it, you should have a zip or executable file in your downloads folder.

Linux

Citagoras is delivered as an application image. You should be able to run it by double-clicking it in the file explorer of your desktop environment.

If it doesn't run, make sure the executable permissions are set. You can set these permissions by opening a terminal and issuing

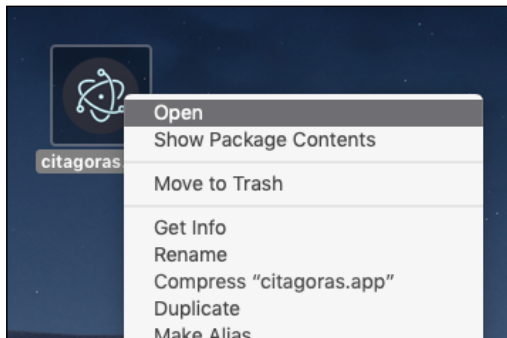
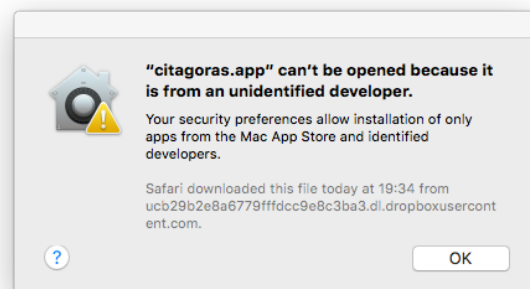
```
chmod a+x /path/to/citagoras.AppImage
```

macOS

Citagoras is delivered as a zipped application. After unzipping the archive, you should be able to double-click the icon to run it. You will have to confirm that you want to run this application.

Should you be presented with a notification that Citagoras cannot be opened because it is from an unidentified developer (See Figure 2), you can choose to open the application anyway.

This notification is triggered by the Gatekeeper software which is an integral part of macOS and checks if the application you wish to launch was created by an Apple identified developer.



In the Finder, right-click or hold the Control key on your keyboard while clicking on the application.

In the menu that pops up near your mouse pointer, select 'Open'. Click 'Open' in the dialog window asking you to be sure to open the application.

See <https://support.apple.com/en-us/HT202491> for more details.

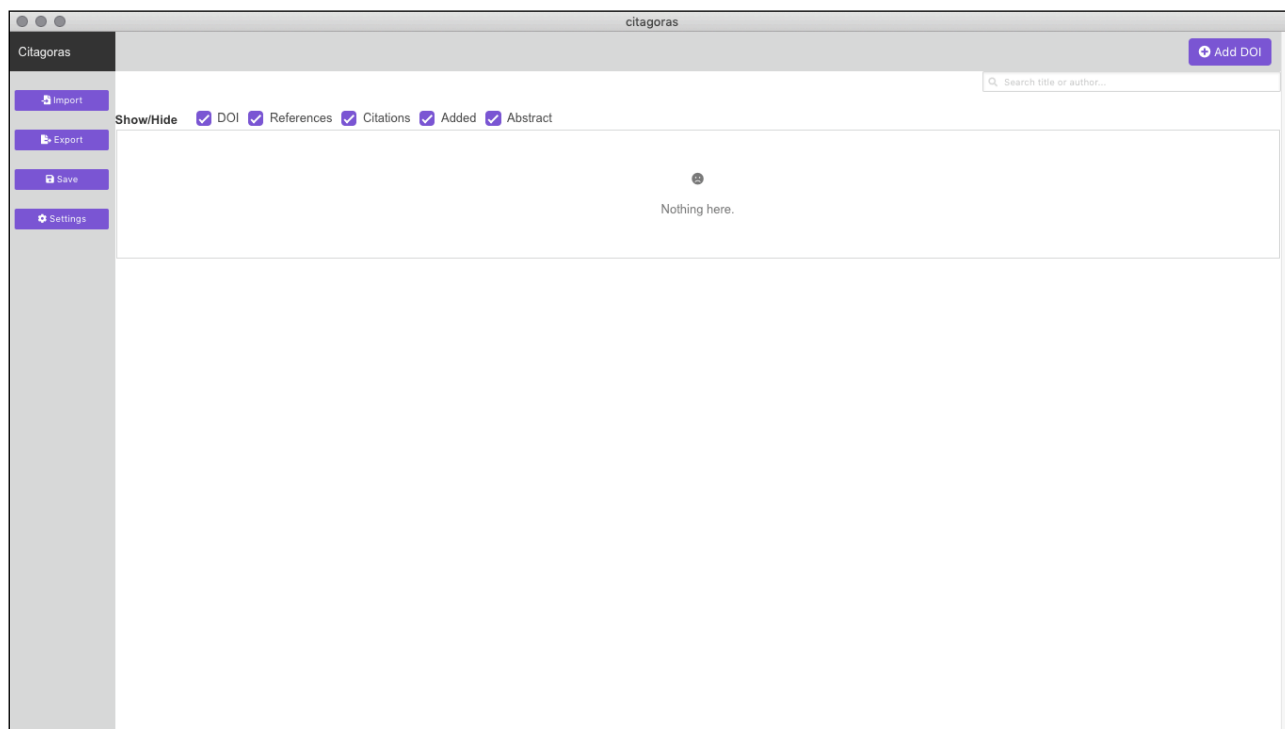
Windows

Citagoras is delivered as an executable installer.

- Double-click the 'citagoras Setup' executable; this will launch the installation
- The installer will create a shortcut on your Desktop as well as create an entry in the Start Menu
- Citagoras will be auto-started at the end of the installation procedure

4. The Main Screen

After launching, you will be presented with the Citagoras main screen in which you maintain your bibliography of scientific literature.



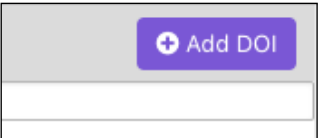
On this screen you can add your scientific literature if you know the Digital Object Identifier or DOI by clicking the 'Add DOI' in the upper right hand corner.

Most controls on the screen have a tool tip associated with them. Hover the mouse pointer near a button to display more information.

On the top of the screen you find filter controls to use on your bibliographic entries in the main data table. In the grey left hand side bar, you find buttons to import, export and save your entries as well as a button to access the application's settings.

4.1. Adding an article by DOI

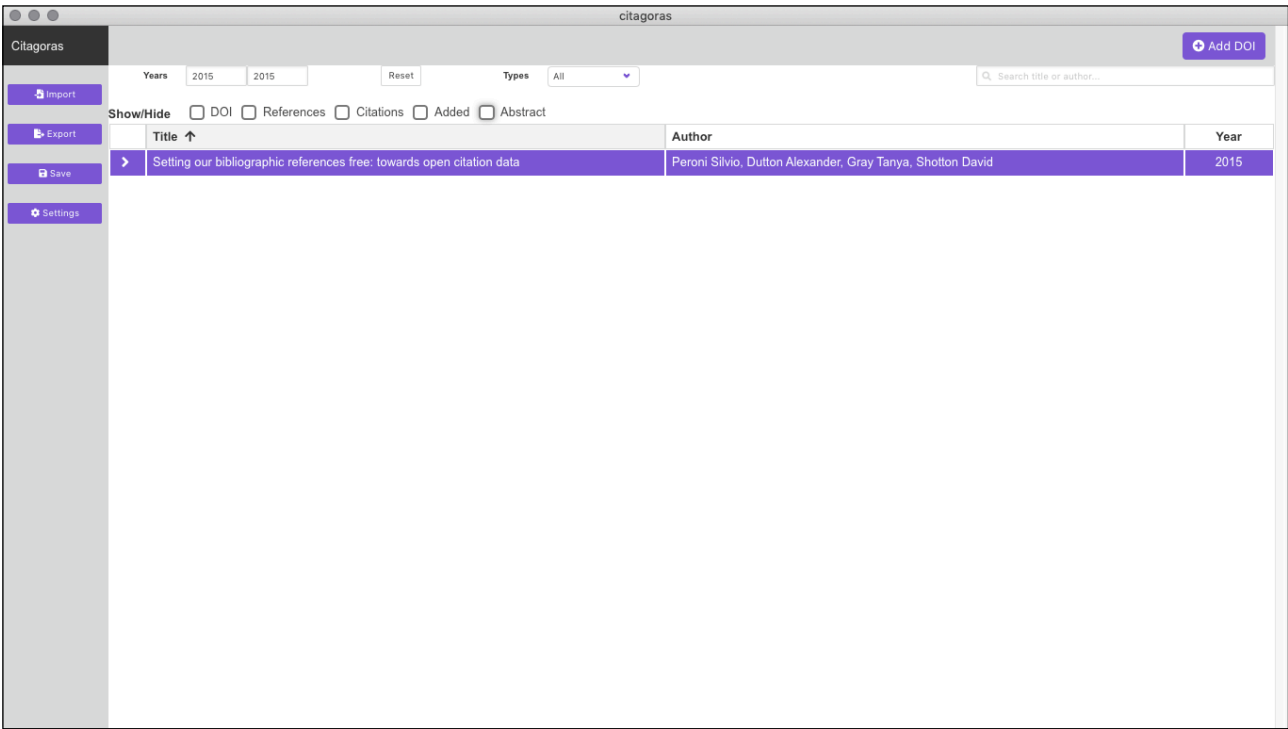
If you know the DOI of an article, you can add it by clicking the 'Add DOI' button in the upper right hand corner of the window.



You will be presented with a dialog in which you can enter or paste the DOI. Once entered, click 'Add'.

A dialog box titled 'Add a DOI'. It has a light gray header bar. Below the header is a white input field containing the text '10.1108/jd-12-2013-0166'. At the bottom right of the dialog are two buttons: 'Close' and 'Add'.

Clicking 'Add,' will trigger an online search to retrieve the information on your article. During the search, you will see a progress bar along the top of the main application window displaying overall status. If any errors are encountered, you will receive a red notification at the top of the screen. All error messages can be viewed and saved in the log window under settings.



After the search is completed, your article's information will be displayed in the main table.

You can sort on all fields in the table and switch between ascending or descending by clicking the table header fields.

On the top of the main screen, you have filter controls to dynamically narrow down the list of articles in the table

Basic Filters

Years

Allows you to select the lower and upper year boundary between which articles should fall. Click 'Reset' to revert to the minimum and maximum year found across all your articles.

Years

Types

Allows you to select which article types should displayed.

Types

Search

Allows you to perform a free text search on title, authors and publication.

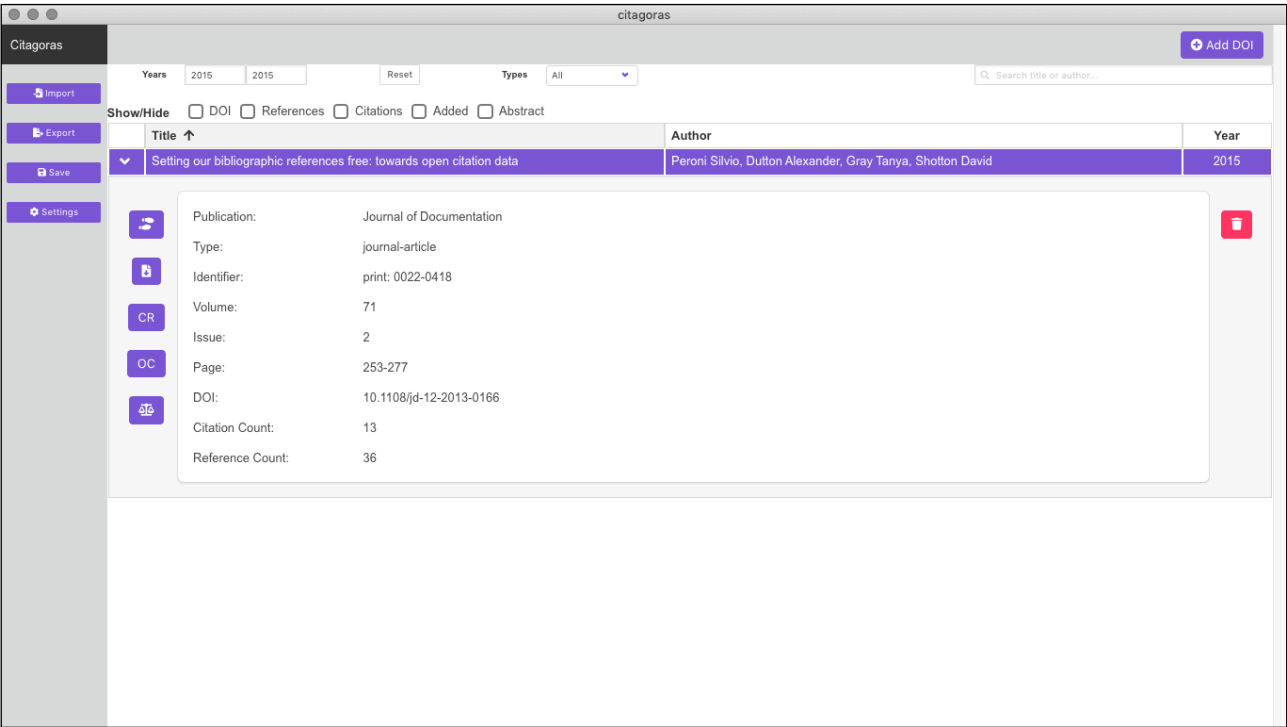
You can also add additional columns to show more information by clicking the relevant checkboxes on top left side of the table.

Show/Hide	<input checked="" type="checkbox"/> DOI	<input checked="" type="checkbox"/> References	<input checked="" type="checkbox"/> Citations	<input checked="" type="checkbox"/> Added	<input checked="" type="checkbox"/> Abstract					
	Title ↑	Author	Year	DOI	R#	C#	Added	Abstract		
>	Setting our bibliographic references free: towards open citation data	Peroni Silvio, Dutton Alexander, Gray Tanya, Shotton David	2015	10.1108/jd-12-2013-0166	36	13	12/05/2019, 10:16:05			

Column Title	Description
DOI	Digital Object Identifier for this article
Citations/C#	Amount of citations found for this article
References/R#	Amount of references found for this article
Added	The date and time when you added this article
Abstract	If an abstract is available, it will show up as 'available'

4.2. Displaying more information on your article






In the main screen you can select an article in the table listing and show more information on it by clicking on the left arrow.




This will display a details card on the article, listing additional information and actions.

Title	Description
Publication	Where the article was published
Type	What type of article it is e.g. a journal article or book chapter
Identifier	A comma separated list of ISSN or ISBN for the article
Volume	If applicable, in which volume this article was published
Issue	If applicable, in which issue this article was published
Page	If applicable, which pages did the article span in the publication
DOI	The Digital Object Identifier for this article
Citation Count	How many available citations were found by Citagoras for this article
Reference Count	How many available references were found by Citagoras for this article
Abstract	If an abstract was found, it will be displayed on the right hand side

On the left hand side in the details card, there are buttons to perform additional actions

Button	Description
	Will take you to the exploration screen for this article where you can visualise its citations and references.
	Will open the download page for this article in your browser.
	Will open the information as provided by the CrossRef API in your browser.
	Will open the information as provided by the OpenCitations API in your browser.
	Will open the discrepancy report for this article. See the section on this for more information.

On the right hand side of the details card, you can find the following actions

Button	Description
	This removes the article from your listing. There is no confirmation dialog.

The Discrepancy Report

The discrepancy report shows for each data provider the application uses, how much was reported by the provider and how much the application actually found available

The main reference data provider, which is currently CrossRef, only offers that reference data which the publishers of individual articles have marked as public. CrossRef does offer a total count of all references, both private and public for each article.

The main citation data provider, currently OpenCitations, offers both reference and citation data, all of which are public.

This report allows the user to examine how many articles are left out of the publicly available set.

Discrepancy Report	
Crossref	
Reference Reported:	40
Reference Found:	36
Citation Reported:	19
Citation Found:	
OpenCitations	
Reference Reported:	
Reference Found:	
Citation Reported:	13
Citation Found:	13
Close	

In this example, we can see that CrossRef reported 40 articles which are referenced by the article for which we expanded the details card. By contrast, it offers information on only 36 of those 40 entries in its public API.

CrossRef also reported a total of 19 articles which refer to the article for which we expanded the details card. However, since citation data is a service only available to publishers, it shows no entries for 'Citation Found'.

4.3. Settings

Clicking the 'Settings' button on the main screen will present the application settings dialog.

Settings

CrossRef API Endpoint

http://api.crossref.org/works/

OpenCitations API Endpoint

https://opencitations.net/index/api/v1/metadata/

Download throttle

8

Log

Cache TTL

7

Show Development Options

☐



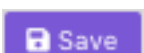
Close

Apply Changes

Setting	Description
CrossRef API Endpoint	The URL used when you click the CR button in the details card to open the CrossRef API data on an article
OpenCitations API Endpoint	The URL used when you click the OC button in the details card to open the CrossRef API data on an article
Download throttle	<p>How many connections/second will be used when downloading reference and citation data for an article.</p> <p>The minimum value is 0 which effectively disables the control. This will open as many parallel connections as there is metadata items to fetch.</p> <p>Default value is 8</p> <p>Maximum value is 12</p>
Log	This shows all errors reported for this session of the application. You can copy them from the text window or save it as a text file.
Cache TTL	Time for downloaded copies to live in the cache before they are downloaded again.

4.4. Import/Export

The buttons on the grey left side navigation bar are provided to import and export data.

Icon	Description
 Import	Prompts you to import a text file containing DOIs to import
 Export	Will prompt you to export your bibliography as a list of DOIs
 Save	Will prompt you to save your bibliography in JSON format

Import

The import button allows you to import a text file with a list of DOIs separated by newlines.

Export

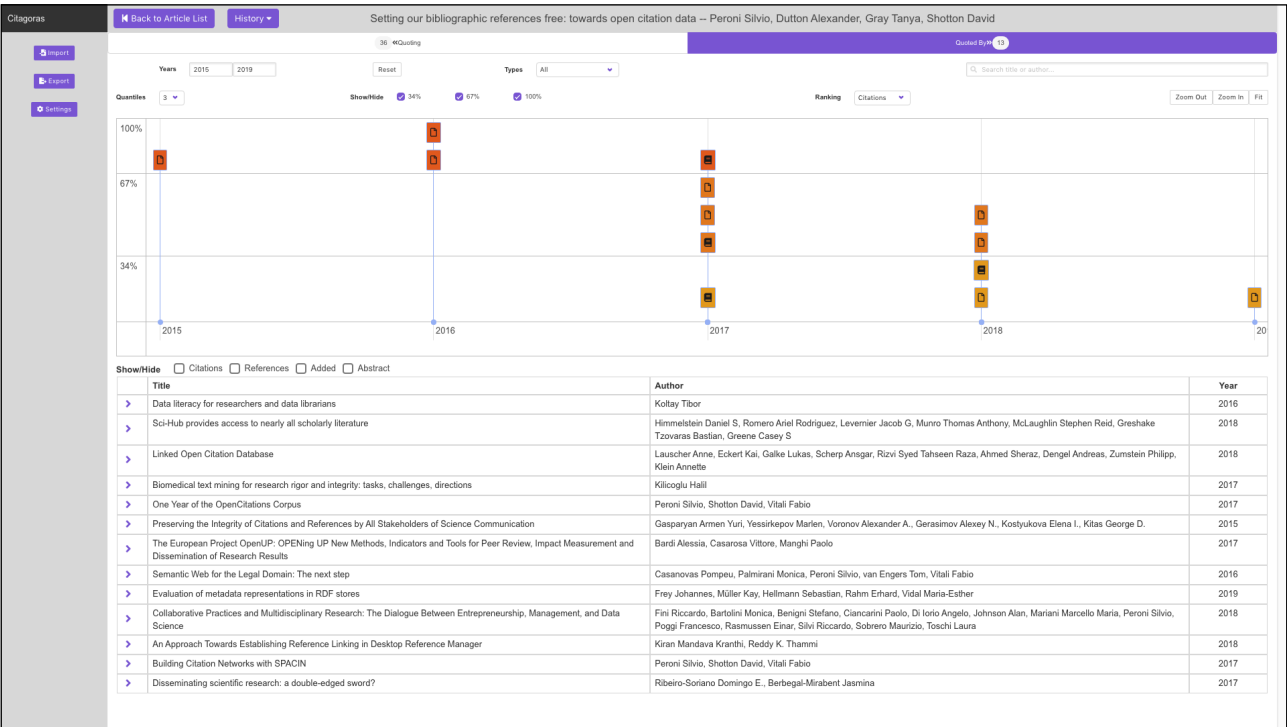
The export button allows you to export your bibliography as a list of DOIs.

Save

The save button allows you to export all the data of your bibliography in JSON format

5. The Exploration Screen

Clicking the footsteps icon in the details card of an article will take you to the exploration screen.



The title bar shows two navigation buttons as well as the title of the article you selected to explore.

Button	Description
	Will take you back the to main bibliography
	Drop down that shows all entries you visited so far in this session. You can jump to any of them by selecting the entry

Tab Sheets

Beneath the title bar, you will find two tab sheets, one for the references of this article and one for that citations i.e. the articles that refer to this article.

Filter and Graph Controls

In each tab sheet, you will find the same basic filter controls as you found on the home screen as well as additional graph controls. The basic filters will apply to both the article listing table and the graph. The graph controls will only apply to the graph.

Time Line Graph

The graph shows all articles, references or citations on a timeline. The source type of an article is indicated by its icon (journal or book so far supported). The articles are divided in vertical quantiles based on the amount of citations or references they have themselves.

Bibliographic Table

A similar table as your main bibliographic table is displayed for the articles. Each entry can be expanded to show the details card and the same actions can be performed once you have added the entry.

5.1. Filter and Graph Controls

Basic Filters

Years

Allows you to select the lower and upper year boundary between which articles should fall. Click 'Reset' to revert to the minimum and maximum year found across all your articles.

Years

2015

2015

Reset

Types

Allows you to select which article types should be displayed.

Types

All

Search

Allows you to perform a free text search on title, authors and publication.

Search title or author...

Graph Controls

Quantiles

This control allows you to split the nodes on the graph based on the amount of citations or references they have themselves. You can select up to 4 quantiles.

Quantiles

3

Split into quantiles

Show/Hide Quantiles

Depending on how many quantiles you selected, you can toggle the display of each

Show/Hide

☒ 34%

☒ 67%

☒ 100%

Ranking

Select if you want to rank the articles in quantiles based on the amount of citations or references they have

Ranking

Citations

Graph Zoom Controls

Allows you to zoom in or out of the graph or make the content fit to the window

Zoom Out

Zoom In

Fit

5.2. The Time Line Graph

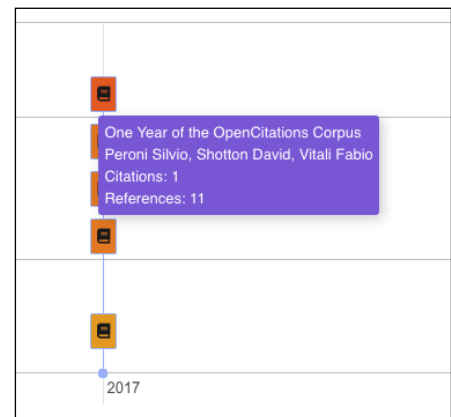
The time line graph shows all citations or references for the article you selected to explore.

The icons on the time line represent articles and you can interact with them. You can quickly glance through them by hovering the mouse button over an icon and it will display a short information summary in a tooltip.

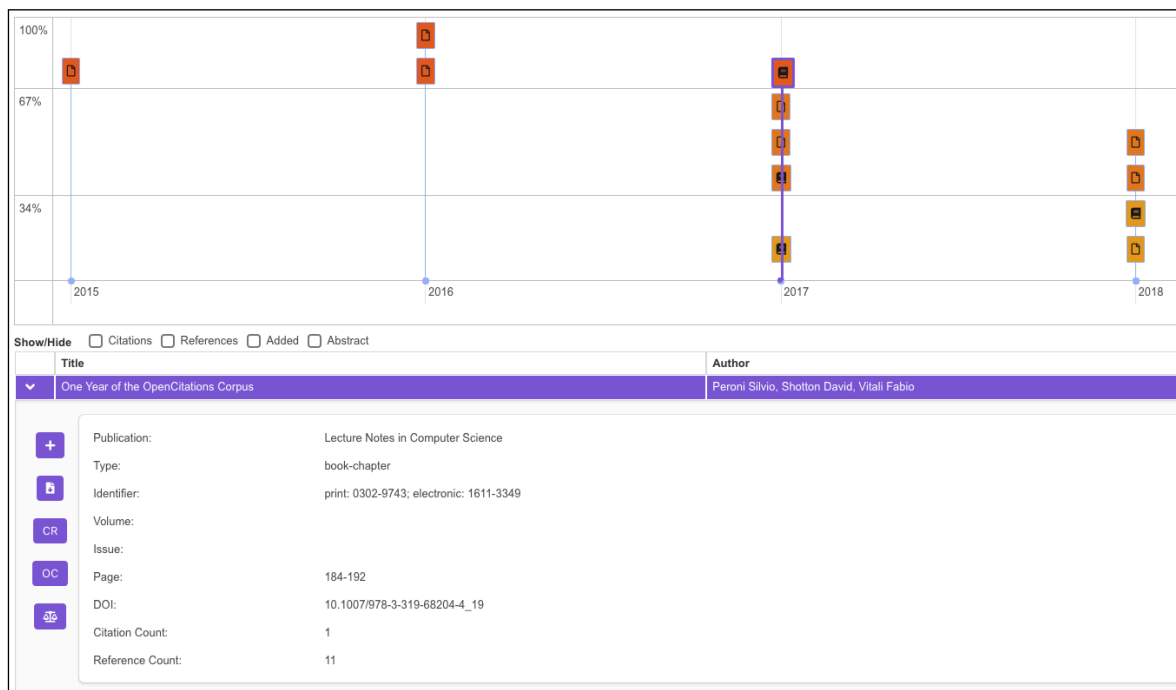
The icons represent the type of the article, whether it is a journal article or a book.

The colour of the icon shows if the article is already in your bibliography (green) or not (orange).

The gradient of the colour corresponds with the quantile an article is in.

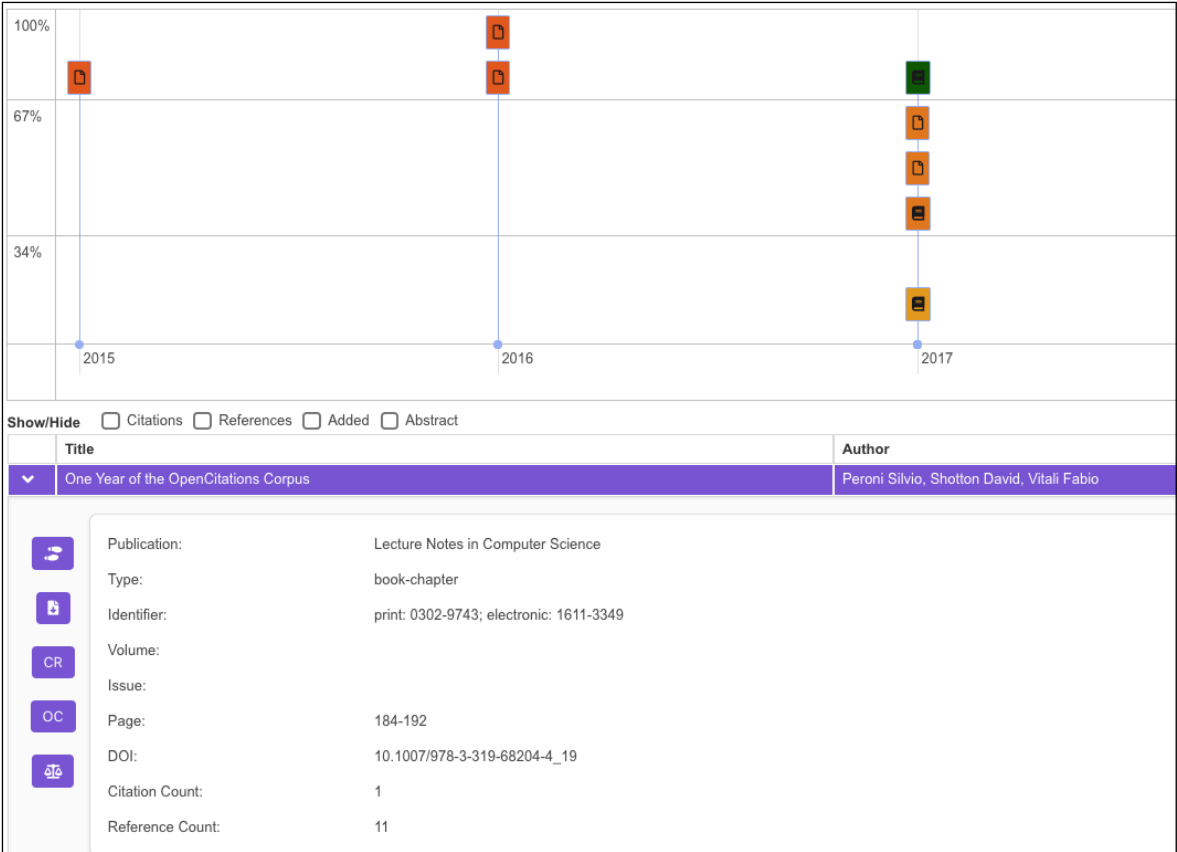


Clicking an item in the timeline graph will select it. The selected article will be selected and expanded in the article table as well so you can view its detail cards.



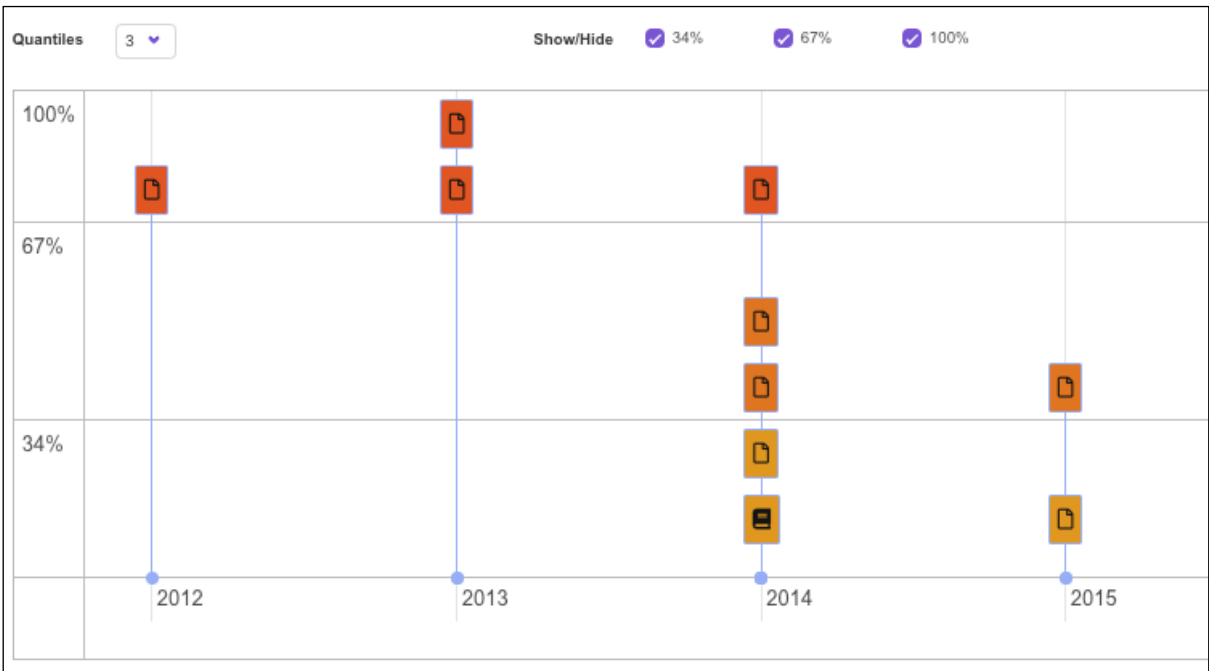
In the details card, you can now add the article to your main bibliography by clicking the plus button. After that, you can explore it by clicking the footsteps which will be displayed afterwards.

The colour of the icon on the timeline will switch to green to indicate you have this in your bibliography. You can also download an article by double-clicking on its icon in the timeline.



5.3. Quantiles

The articles on the time line graph are by default grouped into quantiles or distribution sets, based on the amount of citations or references that article has.



This means that articles in the 34% region when quantiles are set to three, have the least amount of citations or references.

To distribute the articles on the time line according to Citations or References, you can use the Ranking drop down menu.

Ranking Citations

You can control the amount of bands using the quantiles control. You can select starting from 1, showing all articles in one group. At 2, there will be two groups with the cut-off, the article which is considered the median. At 3 and 4, the articles are arranged in terciles and quartiles respectively.

Quantiles 3 Split into quantiles

You can select showing certain bands using the Show/Hide checkboxes

Show/Hide 34% 67% 100%

6. Known issues

6.1. General Issues

Graph Zoom Controls are not completely visible

A workaround is to expand the window to full screen.

The progress bar never reaches the end

At the moment, this is a display issue only. Adding a new article or relaunching the application will reset this.

7. Uninstalling Citagoras

Linux

Uninstall Citagoras by deleting the ApplImage.

macOS

Uninstall Citagoras by dragging it to the Trash.

Windows

Uninstall Citagoras via Settings.

- Launch the Settings app via the Start Menu
- Click the App section in the Settings app
- Search 'citagoras' in the installed applications list to
- Click the entry for Citagoras and click 'Uninstall'

