User Manual

December 2024

If you encounter a technical problem, please contact maintenance at the following address: maintenance@scanlitt.com

I. Foreword

ARTIREV helps to carry out scientific literature reviews and mobilizes different forms of artificial intelligence. This tool is interfaced by API with our own metadata aggregated in our database DATA for Science (DATA_S[1]) and it is also compatible with metadata extracted from SCOPUS (Elsevier), WOS (Web of Science).[2]

DATAMAN and DATAMED are sub-databases of the DATA_S database. To see the list of journals indexed in DATAMAN , please see https://www.scanlitt.com/en/revues-lists/dataman-eu and those indexed in DATAMED https://www.scanlitt.com/en/revues-lists/datamed

From a corpus of documents, ARTIREV groups relevant texts into clusters and creates visual maps to help you understand and analyze your field of research. SOCRATES is one of the features of ARTIREV that translates ARTIREV results into text format.

This document describes the functionalities of ARTIREV_web.

ARTIREV_Lite works in the same way as ARTIREV_web but has fewer features (no visual access to the DATA_S database, lesser number of possible texts allowed for analysis, no detailed recommended readings on screen, etc.)

This user manual concerns the use of ARTIREV, but you can also train yourself in the production of literature reviews by following the course Literature reviews and Bibliometrics carried out by recognized academic experts in these fields of research. To access it, please go to the training page of the SCANLITT website (https://www.scanlitt.com/formation/) and click on In-depth Online Training.

II. Launch ARTIREV

You need an internet connection to use ARTIREV.

Equipped with your username[3] (ID) and password[4] (which you received by email), open the web app by clicking on the following link: https://artirev.scanlitt.com/users/login

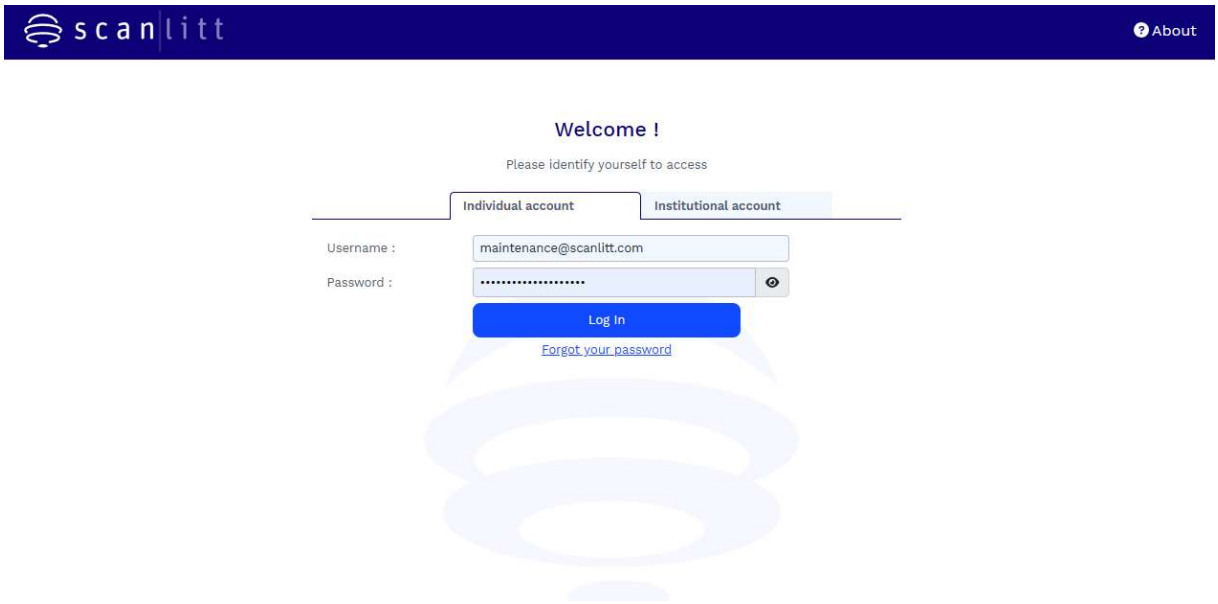
The login page opens. You can then enter your assigned username or ID and password, and click Sign In.

[1] You don't have to do anything extra to use the metadata of DATA_S, which includes DATAMAN (basis for all disciplines of economics and management), DATAMED (basis for medicine)

[2] To use the SCOPUS and WOS metadata, you will need to manually upload it to ARTIREV: see appendices to this document

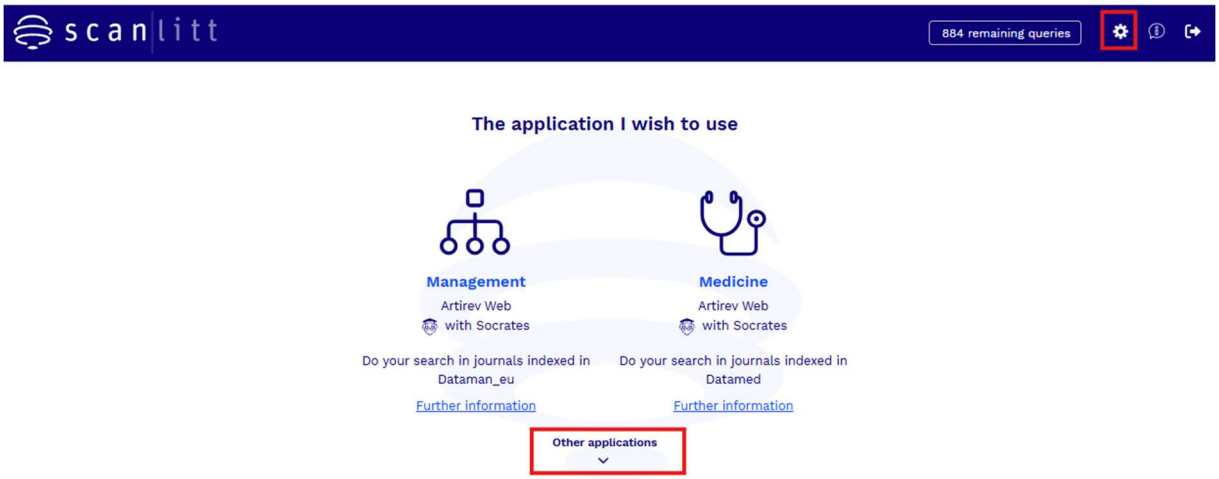
[3] Your username is the email address you registered with

[4] If you can't find your password, click on forgot password



III. Process flow

Once you have entered the platform, you can change the language of the platform front end by clicking on the small cogwheel at the top right of the blue display bar at the top of the screen (see screenshot below)
After logging in, you will need to choose your Artirev_web or ARTIREV_Lite application depending on your discipline. If you want to use ARTIREV_Lite and don't see it as a choice on the screen, click on "Other applications" at the bottom of the screen (see screenshot below)



If you have only subscribed to Artirev_Lite, you will only see Artirev_Lite.

The system will remember your choice of application from one use to the next. If you want to change the application (e.g. web versus Lite) click on the little house in the blue display bar at the top right of the screen to access all the applications.

Once connected to your application, the process will be broken down into 2 steps: Metadata extraction and Results. To make this user manual easier to read, we offer screenshots at each step that illustrate a search carried out

using the keyword: "*serendipity*".

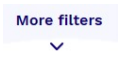
Stage	Module	Description
1	Extraction	• Direct download of DATA_S documents metadata with their bibliographic records via the API.
2	Results	• Generation of maps and word clouds to support interpretation. Interpretation of results in textual format by SOCRATES.

Step 1 - Extraction

To use ARTIREV, you need metadata. ARTIREV includes metadata from DATA_S.

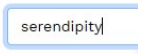
You can do your research:

By entering keywords

Or/and using the filters (advanced search) 

Or/and by Query. 

Keyword Research

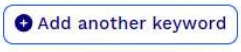
In the search, you enter your keyword(s) in the specified place. 

The query will be generated automatically.

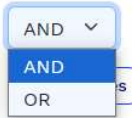
If you wish, you can generate proposals for other keywords, similar to the one you entered. To do this, click on the Synonyms button. 

A list of synonyms will be offered to you, it's up to you to choose 1 or more or none, by clicking on them.

You can also add other keywords by clicking on the “+” button.

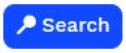


A new row with the same search field will be displayed where you can place the complementary keyword to take into account. However, you must specify which operator to use to link the first keyword to the second. Possible operators are AND or OR



You can delete the line you added by using the - button

Once you are satisfied with the keyword(s), click on Search and ARTIREV will download the data directly from the database.

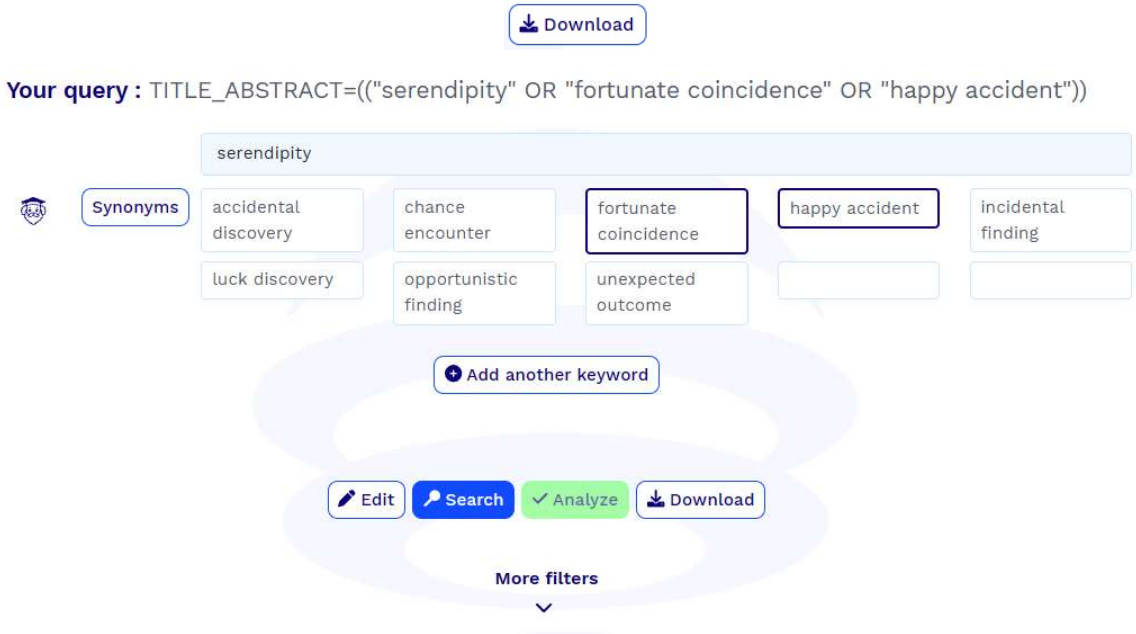


It is recommended not to work on a corpus of more than 500 documents (for ARTIREV_web).

If your keywords bring you more than 500 results, a message will be displayed to tell you the number of results obtained and that it reaches the maximum.

It will therefore be necessary to readjust them or modify the scope of the search base by using the filters in order to restrict your knowledge base to be able to analyze and map it.

If you want to keep the raw database on your computer, click on the download button.



Filters

If you want to refine your selection of texts by customizing the criteria of your search, please click on the “More filters” button.

You can then view the basic filters.

- Search in title, summary: By default, the search is done in titles, keywords and abstracts. You can choose to limit the search to titles only.

- Fields: It is possible to search based on other criteria. You can search by author's name (Author Name and Author First Name). You can also target journals using their ISSNs. Finally, you can target specific articles by filling in their DOIs.

You can also use the filters that will appear on the left-hand side of your screen, once you have entered and validated your keywords-based search by clicking on the “Search” button:

- Years: By default, the search is carried out over all years covered by the data made available by the publishers of scientific journals. But you can restrict the time interval of your search by entering the years you want to cover or by dragging the sliders of the 2 points (start/end) of the segment on the graph.

- Domains: In the management database, journals are classified by field (marketing, finance, etc.). By default, all domains are considered. You can narrow down the disciplinary scope by clicking the desired areas.

For a list of domains and the corresponding acronyms, cf. https://www.scanlitt.com/en/revues-lists/domaines

- Ranks: By default, the search is done in all journals indexed in the DATA_S database, regardless of their ranking. It is possible to focus on a category of journals by selecting the desired ranking(s).

- Journals: You can also narrow your search to certain journals, choosing the journals where the articles you target are published.

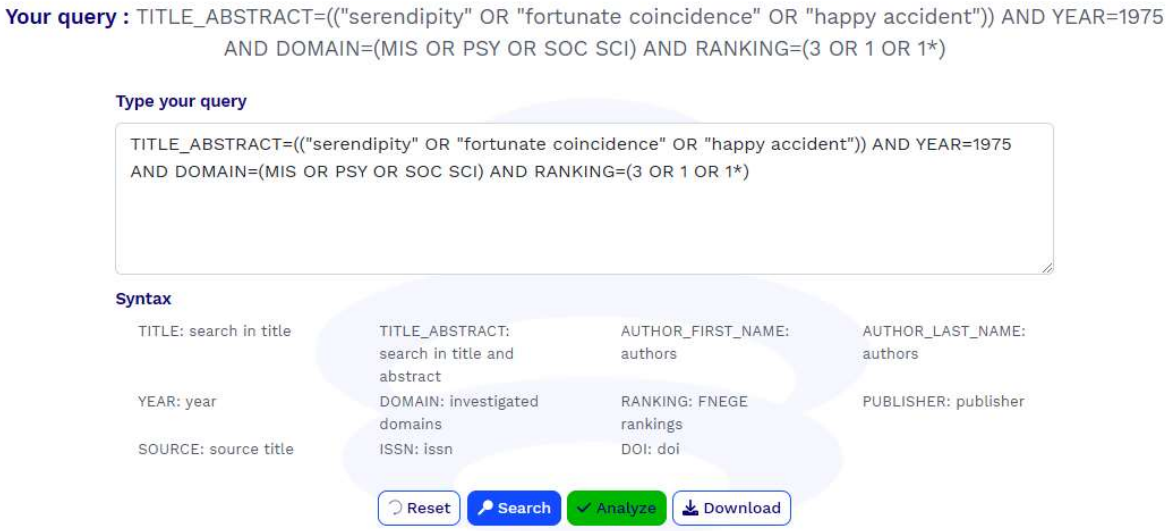
Once you have set the parameters you want, click on Search to check the size of your corpus of texts and for the software to download it. As before, you can download the data directly on your computer by clicking Download.

Query

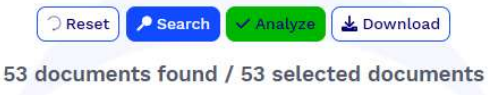
The software automatically generates queries based on your keyword(s), as well as the various parameters selected in the previous steps. It is possible to view and modify the query that appears at the top of the screen directly by clicking on the Edit button.

It is also possible to create your own query directly using the Boolean tags and operators compatible with our API, which are provided to you in the syntax.

This feature requires advanced skills that you can asquire by attending one of our advanced courses housed by the FNEGE: https://fnege.org/formation/

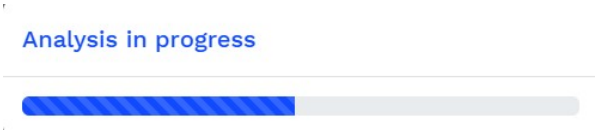


Once the query has been validated/modified/entered, follow the normal procedure by clicking on Search to identify the number of documents available and then the software will retrieve the data directly. Of course, you can download the data on your computer by clicking Download. Or if you want to change your query, you can click on “Reset”.



You will now be able to launch the Artirev scan by clicking on the “Analyze” button.

You will be informed visually on the progress of the analysis



It can take a little time to analyze and display the results (but in general and in any case, from a few seconds to, maximum, a minute or 2) especially if you have many texts, because the system cleans the data before analyzing it.

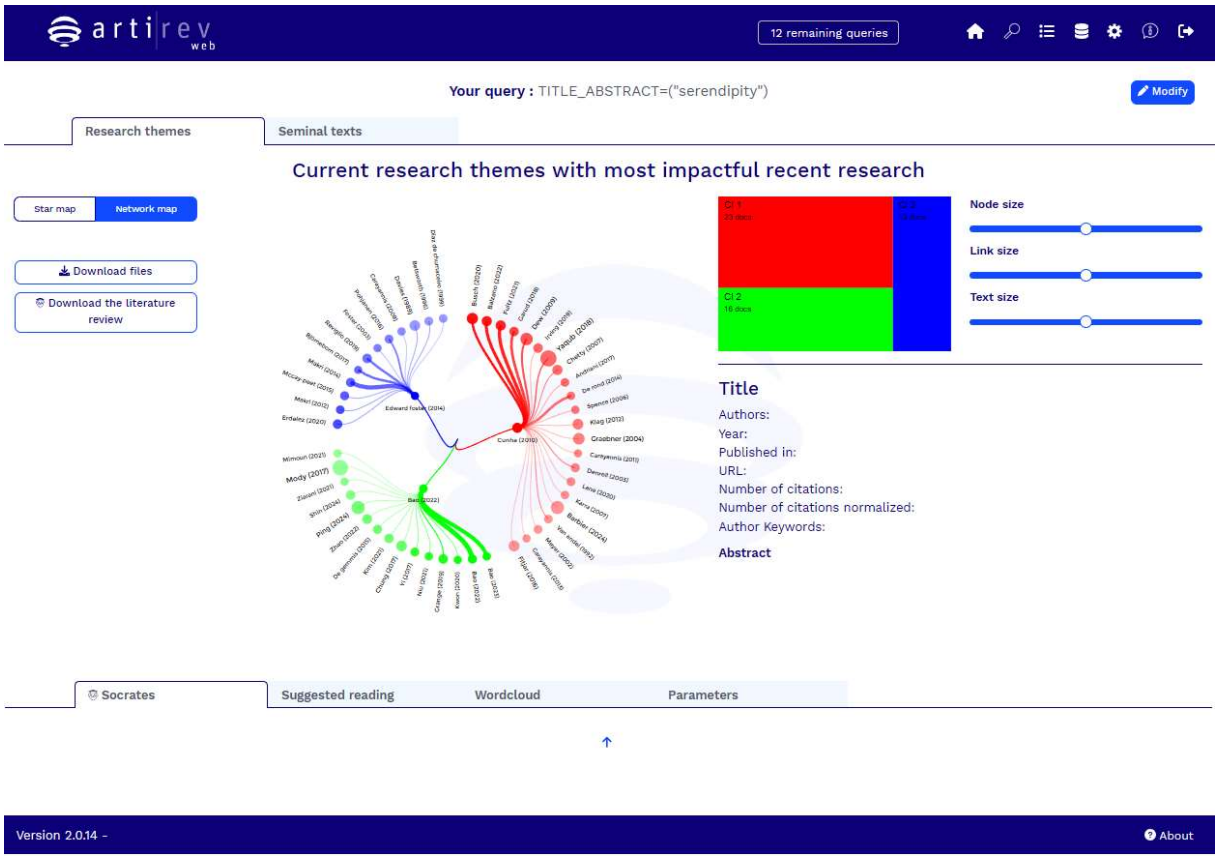
Step 2 – Results

General

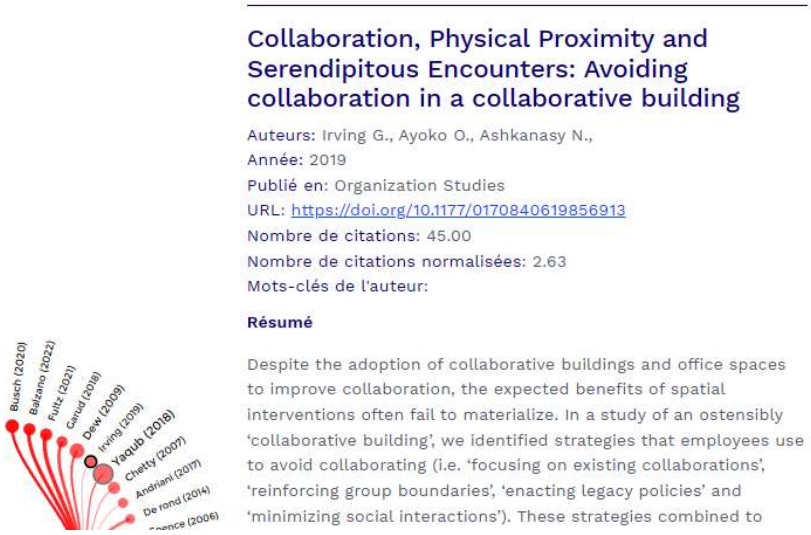
Two sets of results with different maps are proposed. By default, the first set informs you on the current Research Themes of the investigated field and the second set informs you on Seminal Texts grouped in schools of thought. The different maps and their meaning are similar for both sets of results.

Research articles are illustrated by nodes (small circles of different sizes on

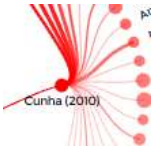
the maps) and are grouped into clusters.



Each cluster has a different color. When you click on a node, the details of the corresponding article are displayed in the right part of the screen.

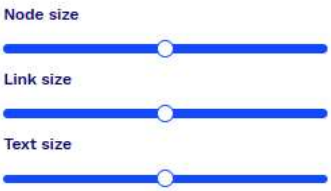


In each cluster, the documents with the most links to the other documents in the group are at the center, at the base of each of the branches. They thus give an indication of the contents of each cluster even if there are usually subclusters, especially when the cluster(s) are relatively large.



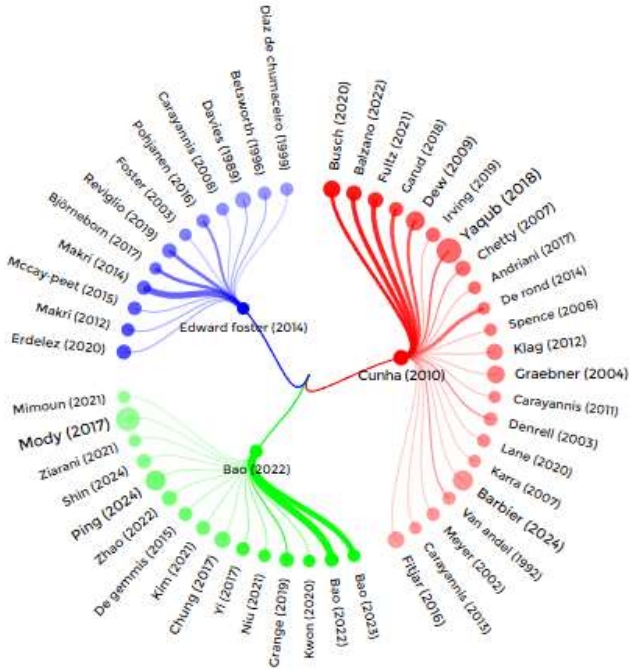
The color gradients of the nodes in each cluster indicate the relative contribution of each node to the cluster's meaning. The thickness of the ties describes their strength. The larger the node, the higher the number of citations (raw number for seminal texts and normalized number for research themes), and the more important/significant the document.

You can adjust the size of nodes, links, and texts for better map readability.



Star Map

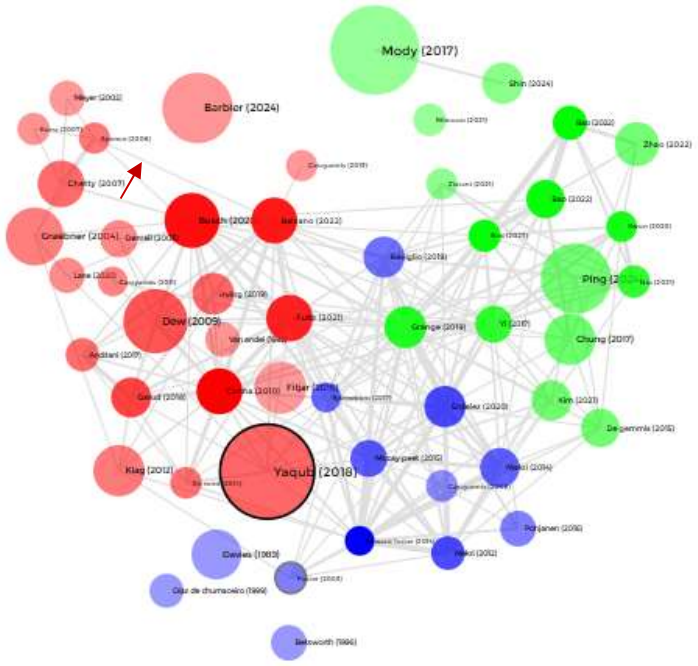
The first map proposed is a star map (see screenshot below)



To change the type of mapping, you will need to use the "toggle" top left of mapping (see below) and select the type of map you want.

Network map

The Network Map is another graphical representation available in ARTIREV (see screenshot below)

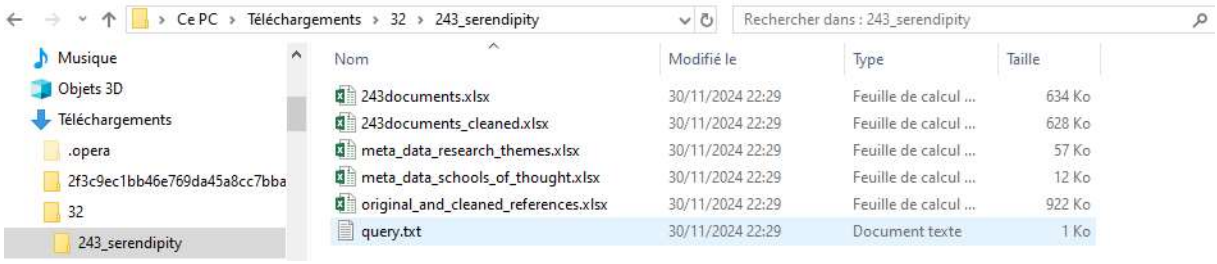


Note that the spatial organization of nodes in the network map can be changed manually by clicking and dragging the nodes on the screen, or automatically by playing with the pull or repulsion cues. You can also add or remove displayed links from this map by playing with the minimum number of links between two nodes. By default, the parameter is set to 2, i.e. a minimum of 2 links between 2 nodes to allow for it to appear on the map (see screenshot below).

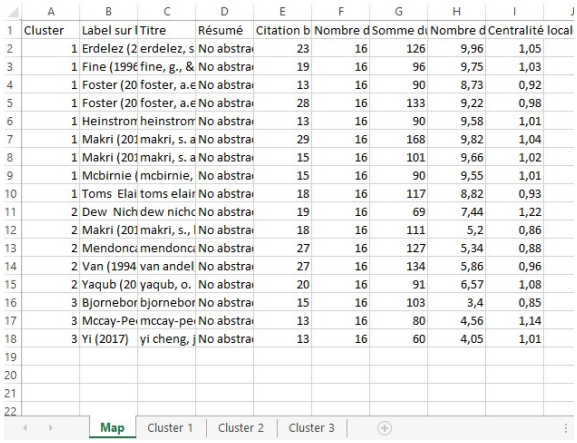
Download results

You can download the detailed contents of the clusters by clicking Download Files.

This archive will contain your query, the results of the selected documents based on your keywords (documents), the cleaned results (documents_cleaned), as well as the list of references cited in the bibliography of articles in your database (original_and_cleaned_references). It also contains the results of the clusters by research theme (meta_data_research_themes) and the results of the clusters by schools of thought grouping together the founding texts (meta_data_schools_of_thought).



From these files, once downloaded to your computer and unzipped, you can then read the information about the nodes/documents directly from a spreadsheet and study the clusters in depth.



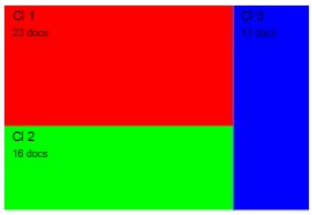
	A	B	C	D	E	F	G	H	I	J
1	Cluster	Label sur l	Titre	Résumé	Citation b	Nombre d	Somme d	Nombre d	Centralité local	
2	1	Erdelez (2	erdelez, s	No abstra	23	16	126	9,96	1,05	
3	1	Fine (199	fine, g., &	No abstra	19	16	96	9,75	1,03	
4	1	Foster (20	foster, a.e	No abstra	13	16	90	8,73	0,92	
5	1	Foster (20	foster, a.e	No abstra	28	16	133	9,22	0,98	
6	1	Heinstron	heinstrom	No abstra	13	16	90	9,58	1,01	
7	1	Makri (201	makri, s. a	No abstra	29	16	168	9,82	1,04	
8	1	Makri (201	makri, s. a	No abstra	15	16	101	9,66	1,02	
9	1	Mcbirnie (	mcbirnie,	No abstra	15	16	90	9,55	1,01	
10	1	Toms Elai	toms elair	No abstra	18	16	117	8,82	0,93	
11	2	Dew Nich	dew nichc	No abstra	19	16	69	7,44	1,22	
12	2	Makri (201	makri, s.,	No abstra	18	16	111	5,2	0,86	
13	2	Mendonca	mendonc	No abstra	27	16	127	5,34	0,88	
14	2	Van (1994	van andel	No abstra	27	16	134	5,86	0,96	
15	2	Yaqub (20	yaqub, o.	No abstra	20	16	91	6,57	1,08	
16	3	Bjornebor	bjornebor	No abstra	15	16	103	3,4	0,85	
17	3	Mccay-Pe	mccay-pe	No abstra	13	16	80	4,56	1,14	
18	3	Yi (2017)	yi cheng, j	No abstra	13	16	60	4,05	1,01	
19										
20										
21										
22										

Map | Cluster 1 | Cluster 2 | Cluster 3

IV. Cluster analysis

Tree map

A Tree map chart is provided for each of the two sets of results (research themes and seminal texts). It represents the data of each cluster, in the form of rectangles whose areas are proportional to the number of texts contained in each cluster.



The specificity of this tree map chart in the research themes or in the seminal texts sets of results is that it allows us to select the cluster we are interested in and to activate SOCRATES, which will translate the results obtained into a textual/natural language format.

SOCRATES

As part of the different types of packs you have subscribed to, you will have at your disposal a certain number of Socrates queries every month that will allow you to use the SOCRATES generative artificial intelligence. If you reach the end of your SOCRATES authorized queries, you will be able to continue

using ARTIREV but without the SOCRATES feature. However, you will be able, if you wish, to buy complementary SOCRATES query packs.

On the tree diagram, clicking on one of the rectangles associated with a cluster of your choice will send you to Socrates' interpretations at the bottom of the page and the text generated by the generative AI.


Thème 1 : Serendipity in Management and Innovation

Résumé : The first cluster explores the concept of serendipity in various fields, including entrepreneurship, management, and innovation. It discusses how serendipity can be facilitated and its impact on performance and value creation. The cluster also includes studies on the role of social capital, improvisation, and network embeddedness in exploiting unexpected opportunities.

Sous-thèmes :

- Serendipity in Entrepreneurship (p.ex., Yaqub O., (2018); Dew N., (2009); Busch C., Barkema H., (2020))
- Serendipity and Innovation (p.ex., Garud R., Gehman J., Giuliani A., (2018); Klag M., Langley A., (2012); Andriani P., Ali A., Mastrogiorgio M., (2017))
- Social Capital and Networks (p.ex., Chetty S., Agndal H., (2007); Fultz A., Hmieleski K., (2021); Balzano M., (2022))

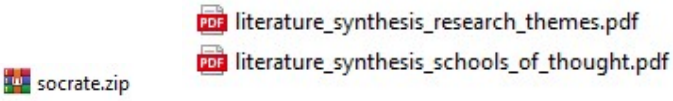
Citations qui n'appartiennent à aucun sous-thème :

- Fitjar R., Rodríguez - Pose A., (2016)
- Cunha M., Clegg S., Mendonça S., (2010)
- Irving G., Ayoko O., Ashkanasy N., (2019)

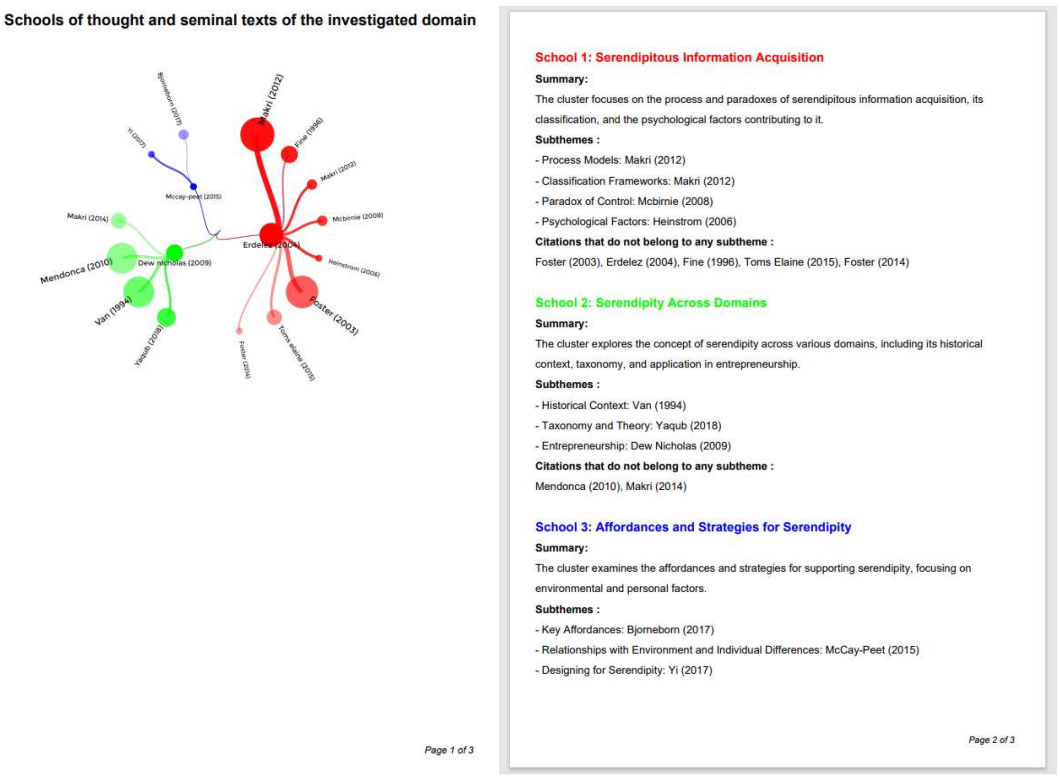
This text appears in the form of a proposed title for the cluster, a summary of the cluster, possible sub-themes with their titles and related references, and also sometimes references that belong to the main theme of the cluster but do not belong to any of the identified sub-themes.

These texts, which represents the skeleton of a literature review in the field you are interested in, can be downloaded by clicking on the "Download the literature review" button.

You will get a compressed/zipped folder to save on your computer. This folder contains 2 pdf files. One for research themes, the other for seminal texts, grouped into schools of thought.



The content of these pdf files is, for each cluster, in the form of a title, the star map and the content generated by the generative AI SOCRATE (see below)



Schools of thought and seminal texts of the investigated domain

School 1: Serendipitous Information Acquisition

Summary:

The cluster focuses on the process and paradoxes of serendipitous information acquisition, its classification, and the psychological factors contributing to it.

Subthemes :

- Process Models: Makri (2012)
- Classification Frameworks: Makri (2012)
- Paradox of Control: Mcbirnie (2008)
- Psychological Factors: Heinstrom (2006)

Citations that do not belong to any subtheme :

Foster (2003), Erdelez (2004), Fine (1996), Toms Elaine (2015), Foster (2014)

School 2: Serendipity Across Domains

Summary:

The cluster explores the concept of serendipity across various domains, including its historical context, taxonomy, and application in entrepreneurship.

Subthemes :

- Historical Context: Van (1994)
- Taxonomy and Theory: Yaqub (2018)
- Entrepreneurship: Dew Nicholas (2009)

Citations that do not belong to any subtheme :

Mendonca (2010), Makri (2014)

School 3: Affordances and Strategies for Serendipity

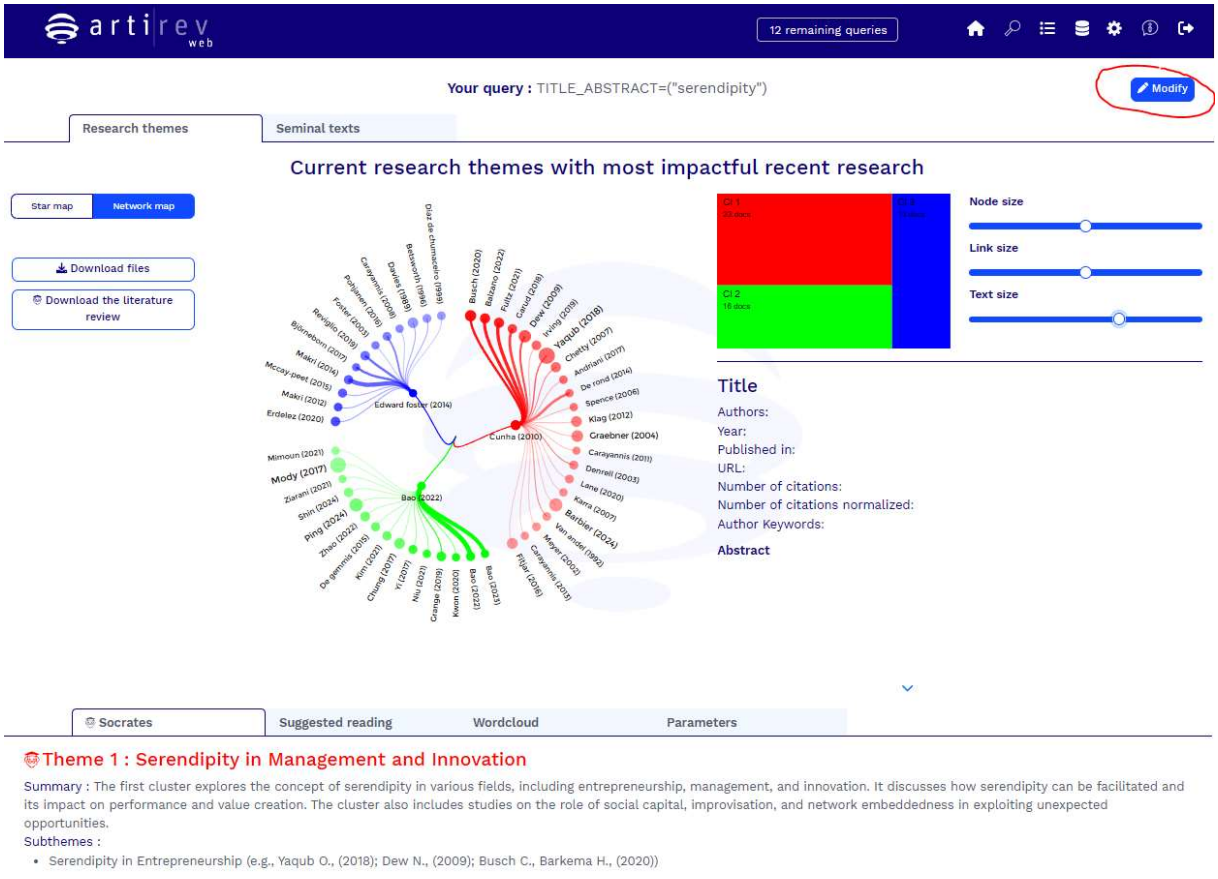
Summary:

The cluster examines the affordances and strategies for supporting serendipity, focusing on environmental and personal factors.

Subthemes :

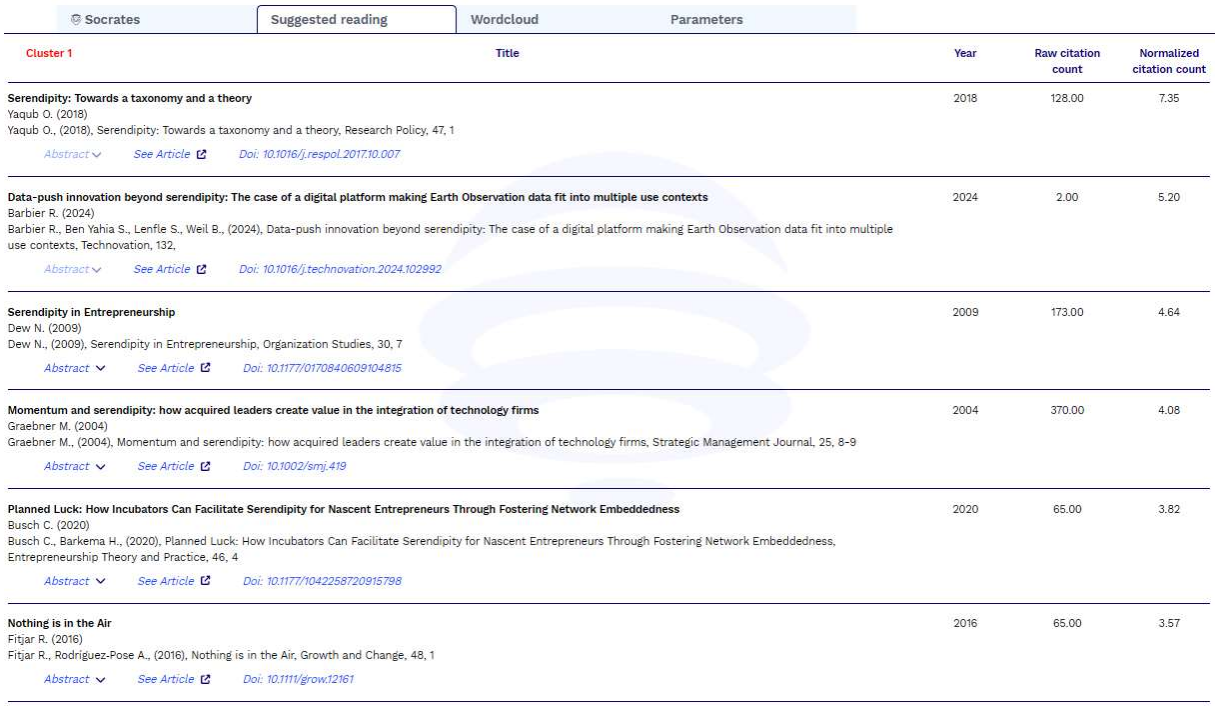
- Key Affordances: Bjorneborn (2017)
- Relationships with Environment and Individual Differences: McCay-Peet (2015)
- Designing for Serendipity: Yi (2017)

If you are not satisfied with the result, you can always modify the original starting query that allowed you to conduct this analysis. To do this, click on the "Edit" button that will send you back to the editing of your query before restarting, if you wish, the analysis processes.



Suggested Reading

The list of texts for each cluster can be viewed directly from the browser in the tab Suggested Reading.

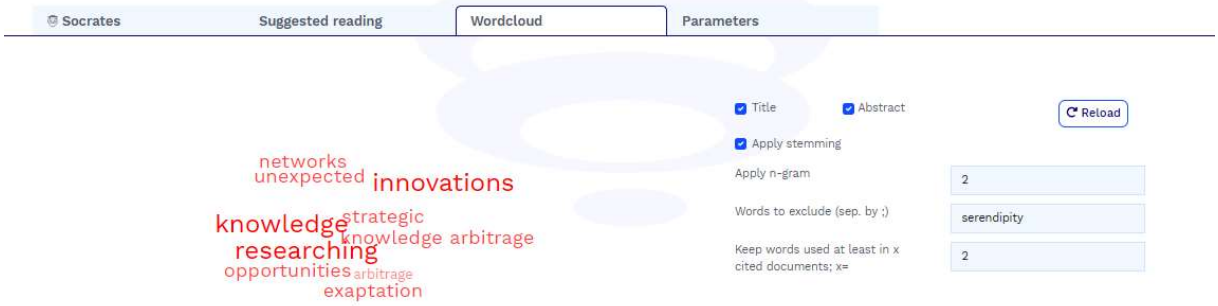


You can click on “Abstract” to view the Abstract of the article when it is made available by the publisher.

You can also click View article or its DOI to access the article on an external page.

Word Cloud

If you click on the Word Cloud tab, you will be taken to a content analysis section that could help you interpret the meaning of each cluster.



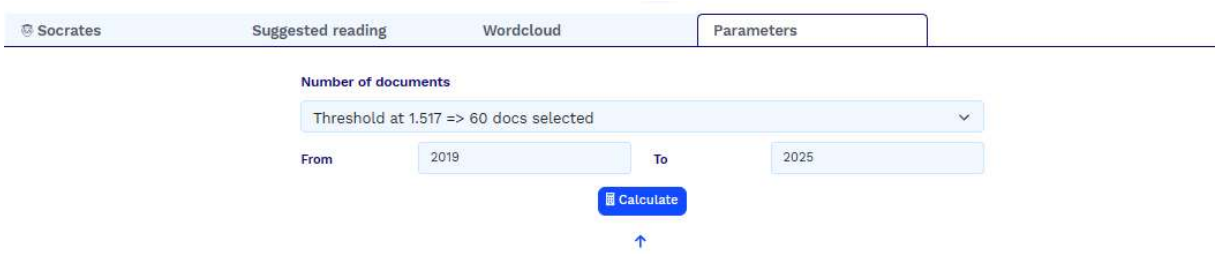
You can customize these word clouds by changing some settings:

- Title, Summary: By default, content analysis is performed on the words used in the Titles and abstracts of the documents on the map. You can decide to reduce the spectrum of analysis to the titles only.

- Apply Truncation: "Stemming" *truncation* is a linguistic technique used in natural language processing (NLP) and information retrieval to reduce words to their basic or root form, known as "stem." Stem represents the main meaning of a word and can be used to group different forms of the same word. When a group of different words has the same root, we keep the longest word in the group.
- Define the n-grams: the 2-grams are applied by default and all sequences of 2 words that are repeated at least 2 times, are taken into account.
- Words to be eliminated: it is possible to enter a list of words that you want to exclude from the analysis. You can also delete words by clicking on them in the word clouds. By default, for data from DATA_S, keywords used in the extraction step are excluded.
- Keep only words with a minimum occurrence: x is the minimum number of documents in which a word is cited, to be taken into account in the analysis. This parameter is set to 2 by default.

Parameters

We have the possibility to interact with the number of documents selected for the final analyses, for example by defining a different threshold of citations than the ones proposed by default by the system (for both sets of results) or by changing the interval of years taken into account (for research themes). You must manually validate the changes made by clicking on the "Calculate" button, which will restart the analysis.



An “up” arrow button can project us back to the top of our page, if desired.

Be careful when changing the system default settings: to date SOCRATES is not capable of analyzing more than 300 texts at a time.

Monitoring tool

There is also a monitoring tool that allows us to follow the history of all our queries without having to relaunch them, with their date, a small overview of the queries in question, the number of documents obtained, and the different actions taken.

To access this tool, you have to go to the blue display bar at the top of your screen and click on the "Your queries" icon, which is on the right of the display bar (see below).

The monitoring tool allows us to use several features that can be useful for our documentary research, in particular, to check the queries already made.

Date	Query	Number of documents	Actions	Active Search
Nov. 30, 2024	TITLE_ABSTRACT=(("serendipity" OR "accidental discovery" O...	903		14 days
Nov. 30, 2024	TITLE_ABSTRACT=("serendipity") AND YEAR=1993 AND DOMAI...	72		7 days
Nov. 30, 2024	TITLE_ABSTRACT=("serendipity")	243		7 days
Nov. 29, 2024	TITLE_ABSTRACT=("technostress")	252		7 days
Nov. 29, 2024	TITLE_ABSTRACT=(("technostress" OR "technoanxiety" OR "c...	401		7 days
Nov. 27, 2024	AUTHOR_LAST_NAME=(Aguinis) AND AUTHOR_FIRST_NAME=(...	213		7 days
Nov. 26, 2024	TITLE_ABSTRACT=(("technostress" OR "technoanxiety" OR "te...	254		7 days
Nov. 25, 2024	TITLE_ABSTRACT=("autonomous car")	10		7 days
Nov. 25, 2024	TITLE_ABSTRACT=("smart contract")	123		7 days
Nov. 25, 2024	TITLE_ABSTRACT=(("crypto currency" OR "Electronic Money" ...	102		7 days
Nov. 25, 2024	TITLE_ABSTRACT=("ownership" AND "luxury")	31		7 days
Nov. 25, 2024	TITLE_ABSTRACT=("career success") AND DOMAIN=(HRM OR ...	976		7 days
Nov. 25, 2024	TITLE_ABSTRACT=(("smart contract" OR "digital contract" OR...	124		7 days
Nov. 25, 2024	TITLE_ABSTRACT=("autonomous car" OR "autonomous vehicl...	320		7 days

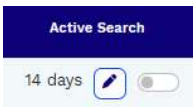
The available features will allow us to:

- Go back to our search (step 1) and consult it or modify the results by clicking on this button:

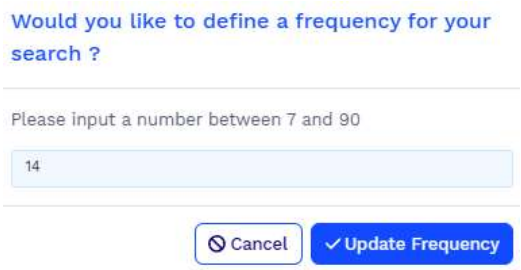
- To return to the results of the analysis by clicking on this button:

- Delete this history with this button:

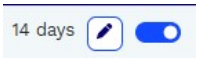
There is also the option to set an automatic search on a regular basis.



Through this functionality, you will be able to activate the automatic monitoring tool by clicking on the button  that will allow you to enter the number of days / frequency for the automatic monitoring, by specifying a number of days between 7 and 90.



You will see if this automatic search frequency is enabled by the following “toggle”:



which you can deactivate at any time by clicking on it.

But be careful, if you activate automatic monitoring and the system automatically relaunches your queries on a regular basis, this will use up your authorized Socrates queries.

V. Appendices

If you want to use metadata from WOS or SCOPUS, your institution needs to have subscribed to these databases. You will need to manually download the data from the corresponding websites and choose in ARTIREV Upload an external database in "Other applications" where you can inject this data.

Appendix A: Extracting data from Scopus (Elsevier)

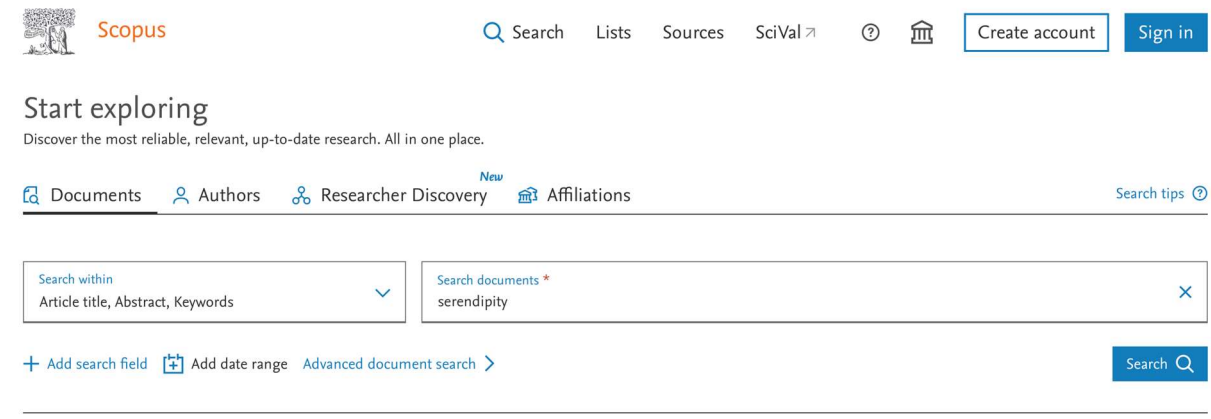
Link: https://www.Scopus.com/home.uri

If you are having trouble logging in to the SCOPUS website, please contact your library support. If you have difficulty downloading data from the SCOPUS website, please contact your library's support service or the tutorials provided by ELSEVIER.

Create a query

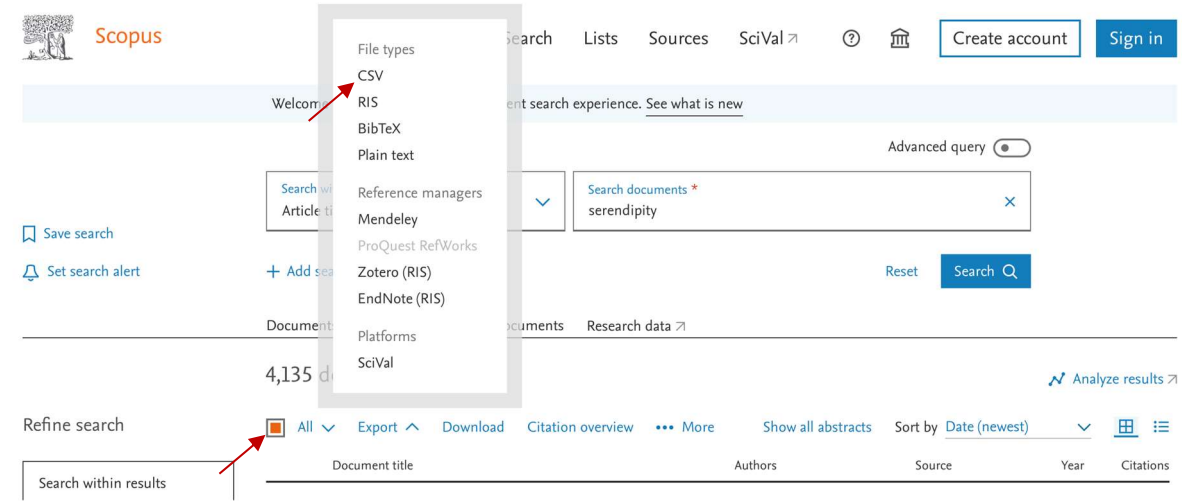
Prerequisite: a valid Scopus account

On the home page, enter your query.

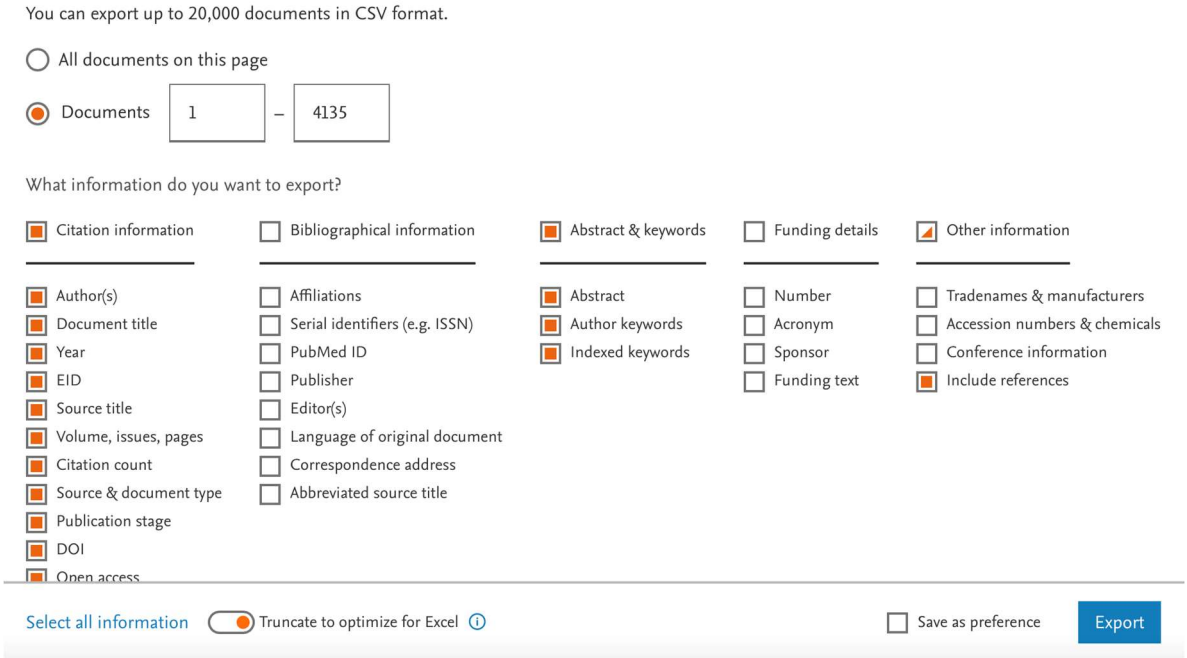


Extract results

Check All and click CSV export



At a minimum, you must select the same information as in the screenshot below. You can of course select others. Then click on "Export"



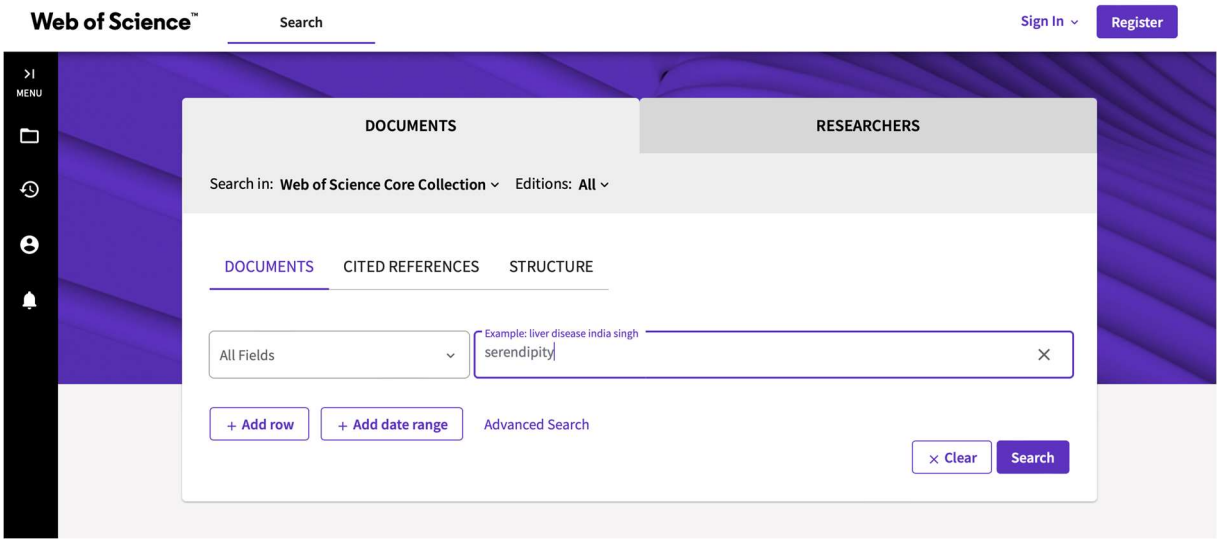
Once the .csv file is downloaded, this will be the file to upload into ARTIREV.

Appendix B: Extracting Data from the Web of Science (Clarivate)

If you are having trouble connecting to the Web of Science website, please contact your library's support. If you have difficulty downloading data from the Web of Science site, please contact your library's support service or the tutorials provided by Clarivate.

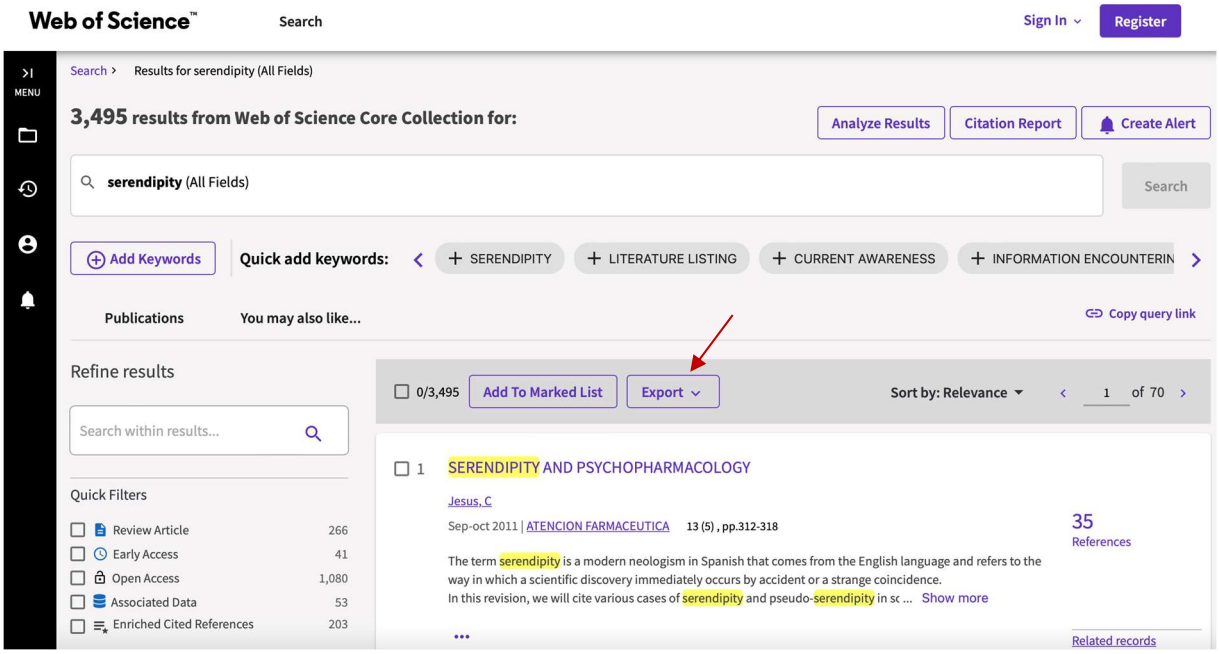
Prerequisite: A valid Web of Science account

On the home page, enter your query.

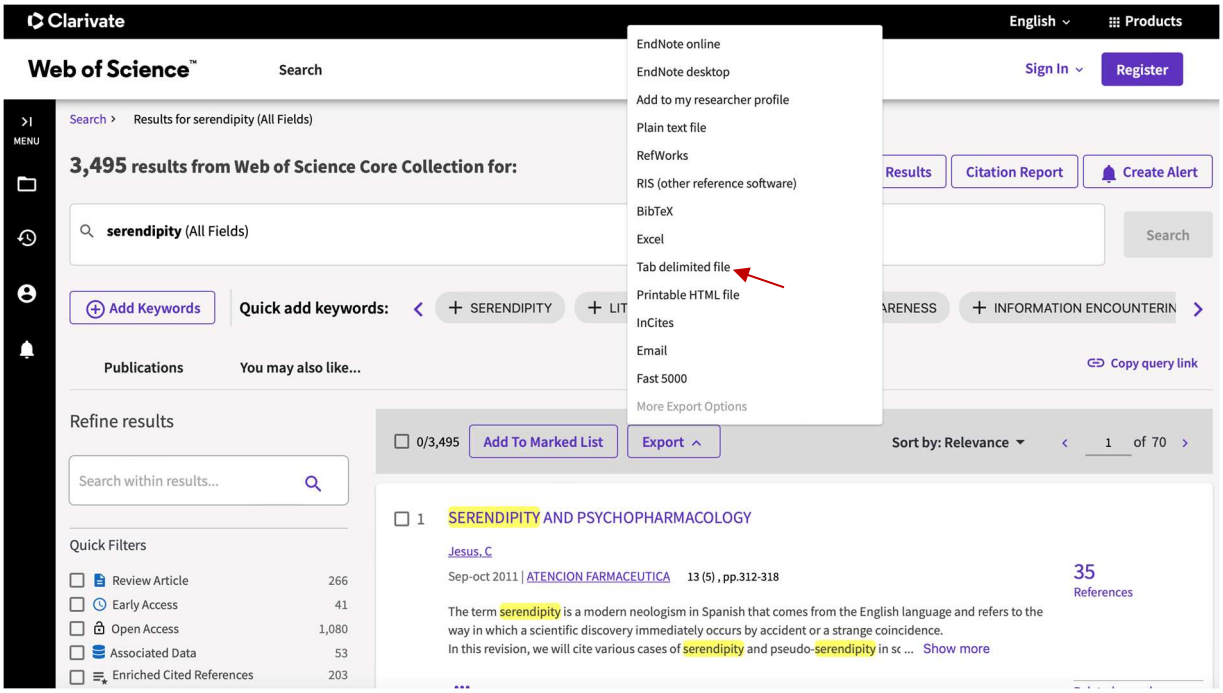


Extract the results

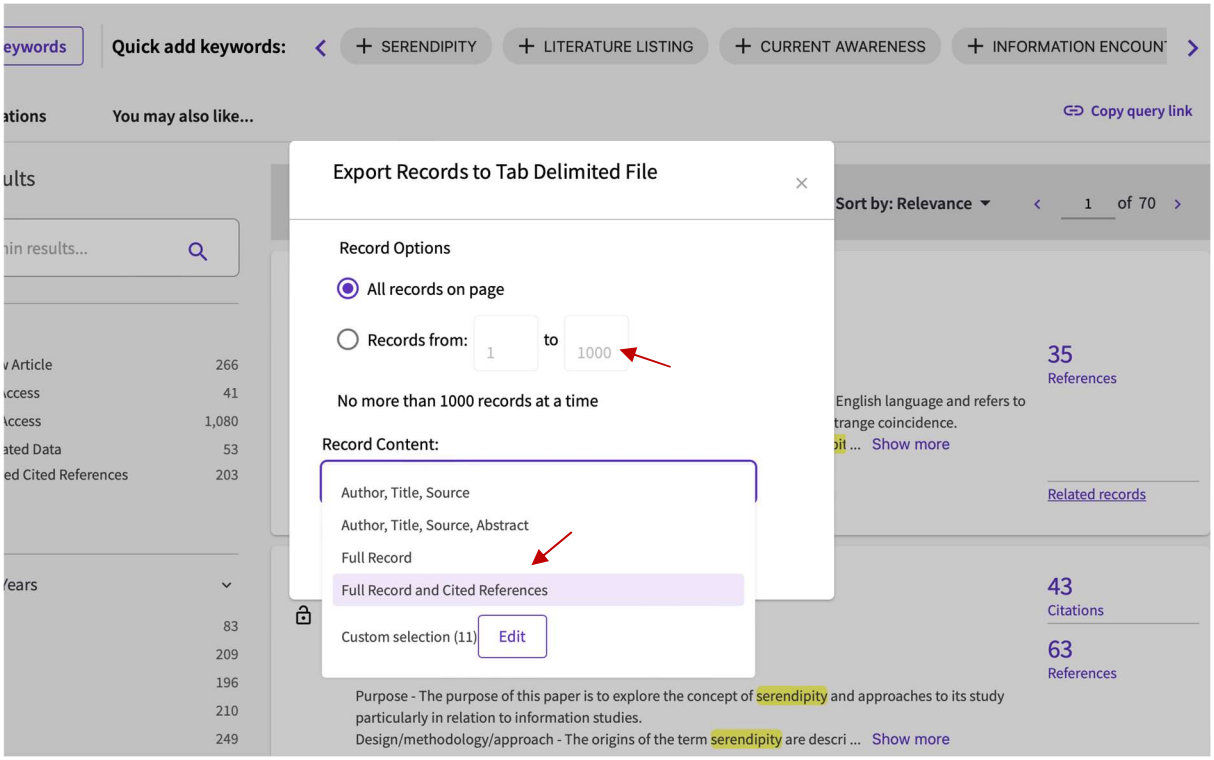
Click export.



Select Tab delimited file



Set the number of records you want to collect, and then click select Full Record and Cited References.



Then click on the Export button and the file.txt will automatically download to your computer.

This will be the file that you must upload into ARTIREV.