PASSIM

RESEARCH TOOL FOR THE STUDY OF
PATRISTIC TEXTS IN MEDIEVAL MANUSCRIPTS

User Manual

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Version 1.0, June 2024.

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Introduction

This document describes how to use the PASSIM (**Patristic Sermons in the Middle Ages**) Research Tool.

The PASSIM Research Tool was developed in the context of the ERC-funded PASSIM Project (2019 – 2024). It helps researchers in the field to study the medieval reception of the Latin sermons preached by the Early Church Fathers, using a digital network of manuscripts.

The sermons of Augustine, Gregory the Great and other patristic preachers were transmitted throughout medieval Europe in the form of sermon collections, preserved in thousands of manuscripts. Nearly every manuscript contains a new combination of sermons, attesting to a continuous, widespread engagement with the authorities of the Early Church.

Medieval collections of patristic sermons were part of the liturgical life of the monastery, but also of an intellectual tradition. They offer unique insights into medieval attitudes toward authority, techniques of appropriation, church organisation, monastic networks and knowledge exchange.

The PASSIM project has compiled a metadata database of medieval manuscripts that contain collections of Latin patristic sermons. This database goes beyond a central repository for currently dispersed information. The manuscripts are integrated in a digital network, which allows for complex queries and network visualizations of the data.

For every manuscript the database contains a detailed analysis of its content as well as information on the date, origin (if known), and provenance. For every sermon the database contains incipit, explicit, attributed author(s), numbering(s) in different reference works. The data are sourced from heuristic tools, manuscript catalogues both digital and in print (e.g. BnF, e-codices), relevant databases (e.g. IRHT Medium, Mirabile), critical editions, studies of the manuscript transmission of the Church Fathers (e.g. HUWA), Claves, and case studies in the field's major journals.

The PASSIM project was funded by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program (grant agreement No ERC-2018-stg 802210).

Terminology

Below is a list of the terminology used in the PASSIM web application. See the relevant subject in the user manual for examples of the use of the terminology when searching, filtering and/or analysing the database content.

The list consists of definitions of the metadata in the PASSIM database. Some of them are PASSIM specific. If no metadata are available most of the metadata field content defaults to '- '.

A	Description
Attr(ibuted) Author	Used in metadata on Manifestations and Manuscripts. This is the name of the author that the manuscript attributes the text to. If no author is named in the manuscript the content of this field will be empty. If there is an attributed author, the following degrees of 'certainty' are indicated by means of a colored 'flag' The value of the 'flag' is determined by the editors of the PASSIM-database. The following 'flag' colors are used: • **Red** or **orange**: if the author is uncertain (e.g. added in a different hand, or unclear which author of several with the same name is meant). Often additional information is provided in the field 'Cod. notes'. • **Grey**: if author attributions are indirect, but likely (e.g. in contemporary capitula, at the beginning of the cod. unit as a whole or the manuscript section, or authorial attribution in referential titles such as *item eiusdem*). • **Green**: for direct authorial attributions in the sermon's title (e.g. *sermo sancti Augustini episcopi*). See also 'Author type' in this list of definitions.
Associated Author	Used in Sermon Gold(s). See also 'Equality Set'. The author (or authorial name) associated with a text in (historical) scholarship, handbooks or specific editions. May no longer be accepted, but serves as an 'archive' for the sermon in question. These can be actual authorial names or pseudo-epigraphic labels (such as 'Eusebius Gallicanus', 'Pseudo-Augustinus Hipponensis') that have been used to describe a sermon in the past.
Author	Author as used in Authority File (AF). This is the historical author responsible for the text according to current scholarly consensus. Who this author is, is determined by editors based on reference works and literature. The content of the field 'Author' can have one of the following values: • **Undecided**: default for imported AF's, a decision needs to be made by editors. • **Dubius**: current scholarship disagrees on two or more real authors for this sermon.

	• **Anonymous**: no author or only pseudo-epigraphic authors have been associated with the sermon in scholarship. • **Name** (e.g. Augustinus Hipponensis): there is only one real person associated with the sermon in the scholarly tradition OR there is consensus in scholarship.
Author Type	This field can be used to filter manifestations with or without defined attributed author. **N.B./** Note that the results might include manifestations whose description is not completed and approved by the editors.
Authority File (AF)	In almost all cases the original text of a sermon is lost. But many later copies of those sermons have (in part) survived. These are called 'manifestations' in PASSIM. An Authority File (AF) is – in the research tradition – a text that is the best approximation of the original version of a sermon. The AF is reconstructed from manifestations of a sermon. An Authority File has an 'Associated Author'. Depending on new insights the status of an AF and/or its author can change. Each AF in PASSIM has a unique PASSIM-code in the form of 'PASSIM XXX.YYYY' (see PASSIM-code).
AF links	In the detailed manifestation information: here you find the links between a manifestation and AFs, if any. Clicking a link brings you to the associated AF.
Alt page numbering	[Not yet implemented]
B	
Bible reference(s)	Bible reference(s) with book name (in English) in full, chapter number and verse number (e.g. Matthew 5:18-23)
Boolean	When filtering information in PASSIM the following Boolean operators can be used: - AND - OR - AND NOT - OR NOT If available, the use of these operators is indicated in front of a search field. Surrounding your text with two asterisks can be used as wildcard to mark inexact wording (e.g. *4096* to find a shelfmark that contains this number). If available, the use of wildcards is indicated in a search field.
C	
Collection	In the scholarly tradition certain sermon collections have gained a particular status, due to their antiquity, the importance of their compiler, or the frequency of their presence in the manuscripts. A number of such collections are represented in PASSIM as templates and/or keywords.
Cod. Notes	Any pertinent paleographical or codicological information pertaining to a manifestation present in a manuscript. For example, marginal notes, anything added in another/a later hand et cetera.
Country	Country where a manuscript currently resides. In filtering: the name of a country must be written in English.
City	The city where a manuscript currently resides. In filtering: the name of a city must be written in the language used in the country the city is in.

Clustering tool	A tool in PASSIM which allows to group manuscripts based on the similarity of their sermon content and visualize the result in different ways (clusters, heatmap). A full documentation of this tool and its functionalities is forthcoming.
Codicological Unit	Medieval manuscripts are often composite: they are composed of several "codicological units", that may date from different periods. If available, the information on these units is presented on the 'Manuscript details' screen of a manuscript in PASSIM.
D	
Date from	Filtering data from a specific year. *N.B./ If for example the user chooses 'date from' = 800 then the results will include the year 800.*
Date until	Filtering data until a specific year *N.B./ If for example the user wants to filter data of the 9th century then the 'date until' must be 899. Choosing 900 as 'date until' filters data from the 9th and the 10th century.*
DCT	Dynamic Comparative Table. This tool facilitates the comparison between the content of multiple text-collections (manuscripts, historical collections, user defined collections).
Direction	Connections between authority files consist of two components. 'Direction' is the qualitative component. It indicates what is known in scholarship about the way two authority files are connected. There are five types op 'direction': - Is part of/has as its part - Uses/used by - Uses (indirect)/used by (indirect) - Common source - Unspecified (= default) The other connection is 'Link type'.
E	
Explicit	These are the last words of the manifestation before the postscriptum (often a prayer). Generally, four to ten words to make it unambiguous.
Equality Set (ES)	An equality set (ES) consists of: - An Authority File - One or more Sermon Gold's The ES is reflection of the research tradition up to now. In some cases, the ES consists of only one AF. The members of an ES have such substantial textual overlap that their texts can legitimately be considered identical.
Editions	Printed editions of a text. For sermons, ideally two editions (Patrologia Latina and a more recent one) are named in which the text of a sermon occurs.
F	
Feast	Liturgical occasion as mentioned (explicitly or implicitly) in a manuscript (e.g., Sermo de Epiphania as the title of a manifestation). In English unless there is no English equivalent (e.g. 'Pascha Annotinum'). This category gathers sermons based on their position in the manuscripts, not based on their content. For feasts or liturgical occasions mentioned in the sermons themselves, PASSIM uses Keywords.

G	
Gryson/Clavis/Other code	Refers to the standard codes in references for Latin patristic writings. The most important being: - Clavis Patrum Latinorum AND/OR - Clavis Patristica Pseudepigraphorum Medii Aevi (CPPM) AND/OR - Clavis Patrum Graecorum (CPG) AND/OR - Gryson's Répertoire général des auteurs ecclésiastiques latins de l'antiquité et du haute moyen âge These standard codes are automatically or manually added to the database. The Gryson/Clavis/Other codes shown in the manifestation details screen indicate the ES('s) a manifestation belongs to.
H	
Historical collection	In the scholarly tradition certain sermon collections have gained a particular status, due to their antiquity, the importance of their compiler, or the frequency of their presence in the manuscripts. A number of such collections are represented in PASSIM as templates and/or keywords. N.B./ A manuscript is labeled with the keyword for a Historical Collection is one or more of the sermons it contains is present in that Historical Collection. To assess the percentage of overlap between a manuscript and Historical Collection, the Comparative Search function can be used.
Historical collections (link)	Historical collections a manifestation occurs in. Links to the historical collections are provided here.
I	
Incipit	These are the opening words of a text. Generally, four to ten words to make it unambiguous.
J	
K	
Keywords	Any keywords attached by the PASSIM-database editors to a manifestation.
Keywords (user)	Keywords attached to a manifestation by a user. If the editor accepts a proposed keyword then it is moved to 'Keywords'. Users can view their personal keywords via MyPASSIM
L	
Locus	This is the folium/are the folia in the manuscript on which the manifestation text can be found.
Links	This field links to other online resources for a sermon or manuscript. These may include digitized images of the manuscript, an online catalogue, an alternative heuristic reference work etc.
Link type	Connections between authority files consist of two components. The 'link type' is the quantitative component and indicates the degree of textual overlap between AF's. There are four link types: - Nearly equals - Partially equals (= default) - Echoes - Unspecified The other component is 'Direction'.

Lectio	If present in a homiliary: The full bible text of the bible reading preceding a manifestation is copied here.
Literature	Any secondary literature about a manifestation, manuscript, AF et cetera. References are usually provided in abbreviated form. Clicking on the reference will bring the user to the correct place in the PASSIM Bibliography.
Library	The library a manuscript currently resides in. In filtering: the name of the library must be as used in the country/city the library is in.
M	
Manifestation	The specific manifestation of a sermon in a particular manuscript. In this category are gathered the specific title a sermon has in a particular manuscript, the attributed author, small variations in Incipit and Explicit. Serves to differentiate the unique features of the hand-copied text of a sermon from its authoritative scholarly reconstruction (AF).
Ms Date	The date (or date range) a manuscript is produced.
N	
Notes	Any further notes on a manuscript, AF or manifestation. May also contain overflow from an automated import.
Notes alt page numbering	[Not yet implemented]
O	
P	
PASSIM-code	A unique code linked to an Authority File. This code consists of: - Three digits that are a code for the author followed by a dot and - Four digits that are a code for the AF Thus, the general form of the PASSIM-code is 'PASSIM XXX.YYYY'.
Personal datasets	Users can save a set of AF's, manuscripts, or manifestations as a Personal dataset via the Basket function. Personal datasets can be accessed through the MyPASSIM environment.
Public datasets (link)	Users have the option to keep a Personal dataset private, share it with a team, or make it public. Public datasets the manifestation, manuscript, collection et cetera occurs in. Links to these datasets are provided here.
Provenance	Information on the provenance of a manuscript: where has the manuscript resided since its origin. Names of places and/or institutions (e.g. abbeys) and/or persons are used.
Postscriptum	A prayer or other addition which concludes a sermon manifestation. Recorded either partially or in full in this field.
Project	A manifestation, manuscript, historical collection et cetera can be part of one or more projects.
Q	
R	
S	
Status	Indication of the status of a data record (manifestation, manuscript et cetera) shown in the form of a 'traffic light': - ***Red***. Indicates that the data (of a manifestation, manuscript et cetera) have been added through an automated process and need editing and final approval. - ***Orange***. The data have been (partially) edited and need final approval.

	- ***Green***. The data have been edited and have final approval. *N.B./Beware of the status of the data when filtering. Only the data with status = **Green** are fully checked and up to date.*
Signature	Alternative term for the Shelfmark of a manuscript.
Saved item	If you saved an item (manifestation, manuscript et cetera) this will be indicated with a blue star in the item details.
Section title	If a title in a manuscript applies to multiple texts following it, then this title is mentioned here. For example, a title pertaining to the feast the manifestations are to be read on (e.g. *dominica II post Pentecostes*), followed by the lectio title.
Super Sermon Gold	Alternative term for Authority File (remnant from an older version of the database.
Super Sermon Gold (links)	Link(s) to Super Sermon Gold if any. Click a link to go to the associated Super Sermon Gold.
Shelfmark	Unique location of a manuscript in a library, also used to denote the combination City + Library + Shelfmark which traditionally makes up the signature of a manuscript.
Sermon Gold	Refers to a member of an Equality set. May be an alternative edition of a sermon, as part of the corpus of an author who is no longer considered the 'real' author of the text. Serves to preserve scholarly archive within PASSIM.
T	
Title	The title preceding a manifestation in a manuscript. If the manifestation is given a number in the margin: this number followed by a full stop precedes the text of the title shown. For example: XVII. [title].
Transcription	Full text of a sermon. In PASSIM, this refers to an edited text (mostly from Patrologia Latina), not to a verbatim transcription from a manuscript.
U	
V	
W	
X	
Y	
Z	

General functional description of the PASSIM Research Tool

The PASSIM Research Tool consists of two main parts:

- The PASSIM web application which can be used to
    - Query the PASSIM database content (list search, filtering)
    - Save queries and query results for later use
    - Analyze the PASSIM database content (network analysis, DCT, clustering)
    - To add/change content to/of the PASSIM database (only editors can do this)
- The PASSIM database. This is a relational database which holds metadata on:
    - Manifestations of sermons
    - Authority files
    - Manuscripts containing manifestations of sermons
    - Historical collections (of sermon manifestations?)

    Of these objects in the database metadata are available that can be used to filter the database content.

The most important relationships that are maintained in the database are:

- Relations between sermon manifestations and manuscripts
- Relations between sermon manifestations and Authority files
- Relations between Authority files which have textual overlap.

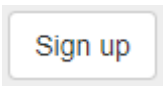
Getting started

Go to https://passim.rich.ru.nl/. You will see the starting page of the PASSIM Research Tool:

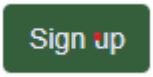
On the PASSIM starting page you can:

First-time user

- Sign up
  - Click the 'Sign up' button.



  - Fill in the required information and click the 'Sign up' button:

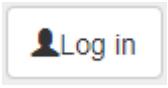


- Login (see ‘Recurring user’)

Important: In need of editing rights (editor account)? Please contact Dr. Shari Boodts at RICH.

Recurring user

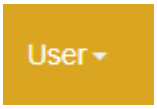
- Log in
  - Click the ‘Log in’ button:



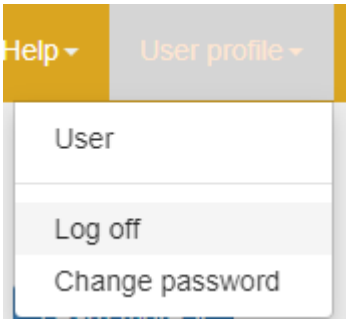
  - Fill in the requested information (username, password)

Ending the session

- Log off
  - To log off: go to the ‘user' menu (top righthand corner of the screen)



  - Click the down arrow



  - Select ‘Log off’ from the menu

The home screen

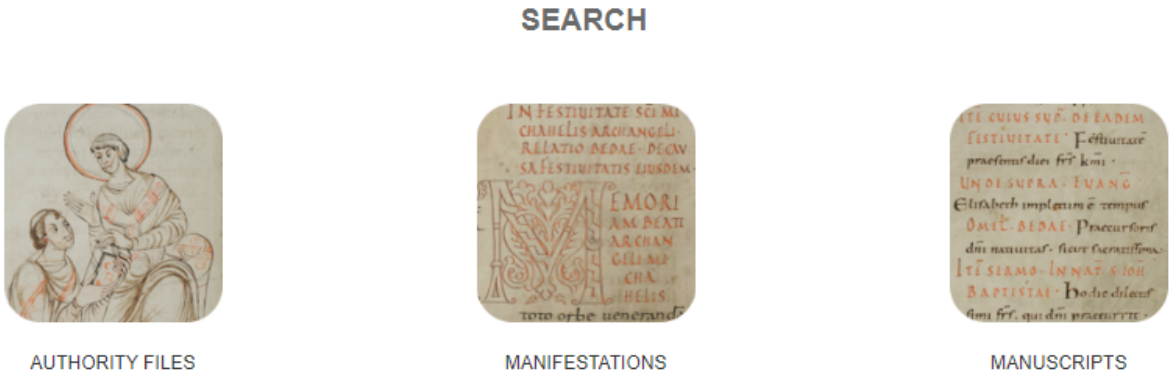
The PASSIM home page is shown after you logged in.

The lay-out in brief:

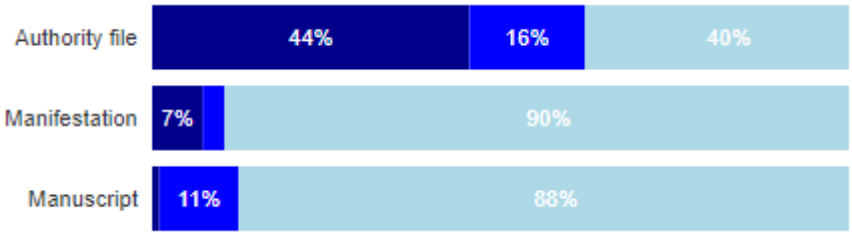
- Top bar. This consists of a row of menu buttons. These lead to the different functions (Browse, Tools, Import tools et cetera) of the web application. These functions will be described later in this user manual.

  Important: clicking the 'Home' button on any PASSIM screen brings you back to the home page.

- Direct links to the functionalities to browse and filter Authority Files, Sermon Manifestations and Manuscripts.



- Summary of the database content and the status of that content.



If you hover over the different percentages, you get contextual help on the information contained in the summary.

- Information on the different datasets that are part of and can be selected in the PASSIM Research Tool.

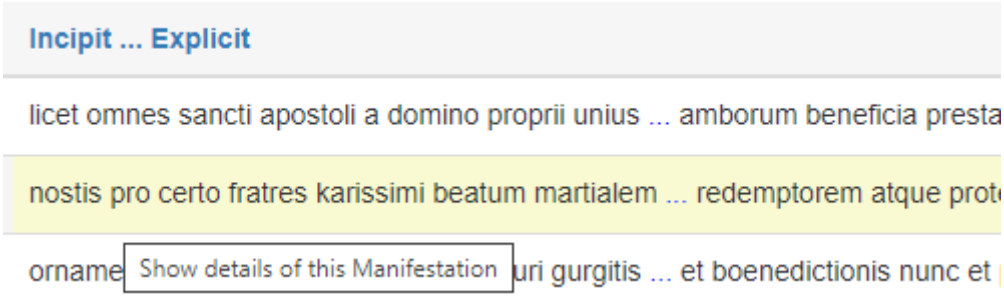
User support

To help the user of the PASSIM web application the following techniques are used

Contextual help

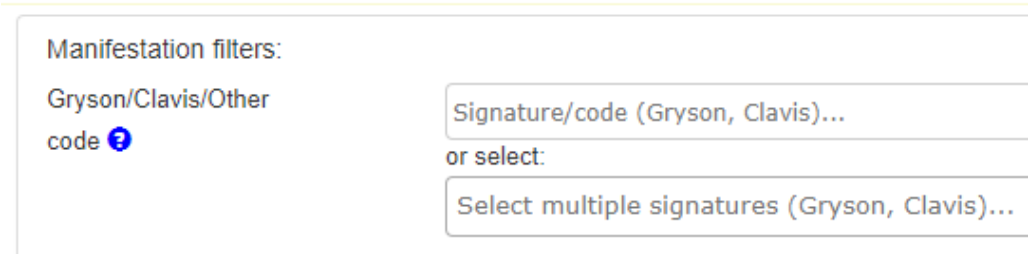
On almost all PASSIM screens you can hover over a term to get short contextual help on that term.

Example: Hovering over the 'Incipit … Explicit' of a sermon manifestation shows the contextual help in a small text block. Clicking the 'Incipit … Explicit' text brings you to a screen with more details on the sermon manifestation in question.

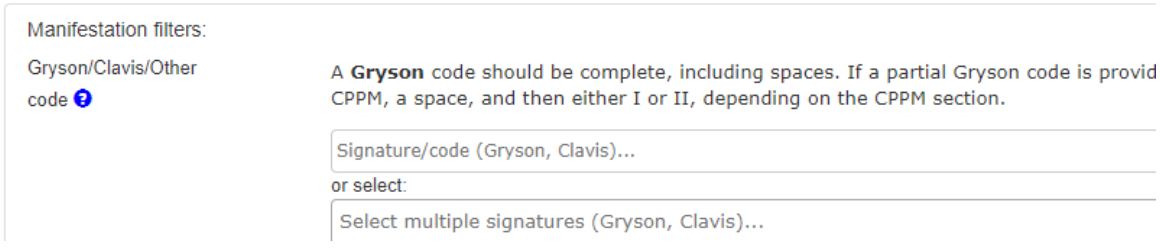


The blue question mark

A more elaborate form of contextual help takes the form of a 'blue question mark'. For example:



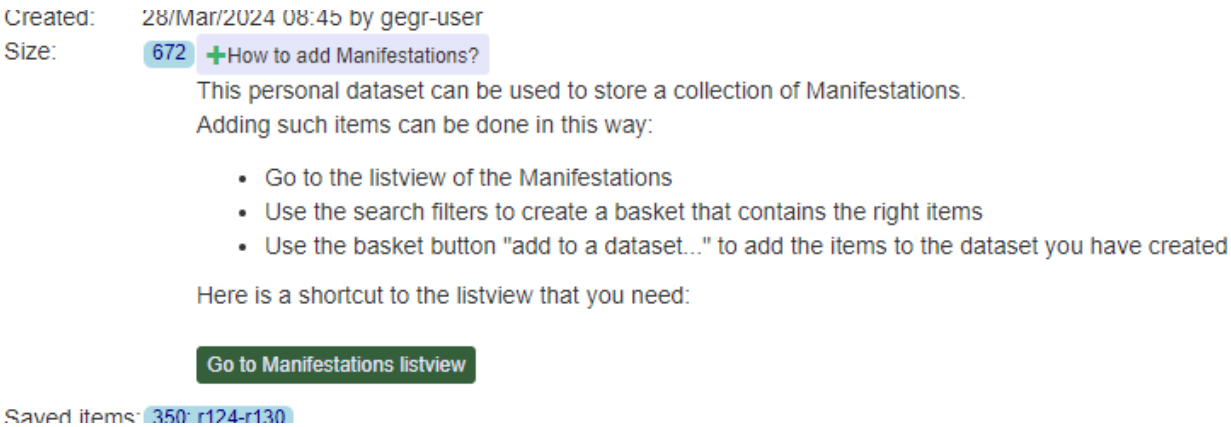
Clicking the question mark shows help information on the rules that are appropriate in using Gryson, Clavis or Other Code.



Click the blue question mark again to close the help information.

The + sign

In some cases (for instance, the details screen of a dataset you saved) this sign is used to give some specific hands-on help information. See the example below. Clicking the sign will show the help information. It is a toggle so you can hide the information by clicking the sign again.



In MyPASSIM the same sign is used in a different way. See ‘MyPASSIM’ paragraph.

User Manual

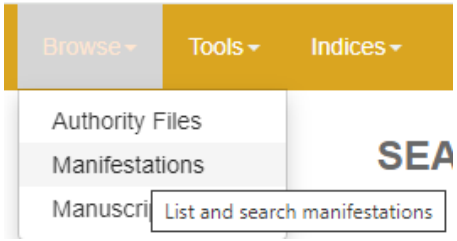
The user manual contains general information on the use of functionalities of the PASSIM web application, and, in some cases, more extended help information.

The user manual is available in the form of a PDF file.

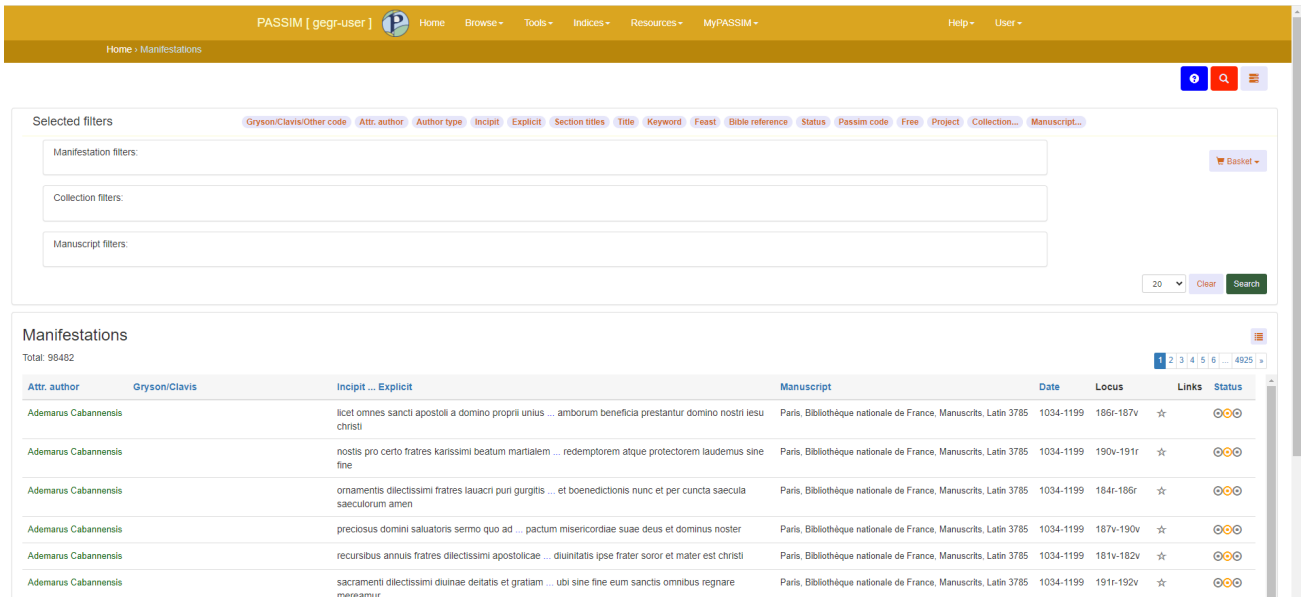
Screen lay-out and general screen functions

To facilitate the use of the PASSIM web application the screens for browsing and filtering the database content have a similar lay-out and navigation. This will be explained in more detail in the example below. N.B./For manuscripts, authority files et cetera the same applies.

If you choose ‘Manifestations’ from the dropdown menu ‘Browse’

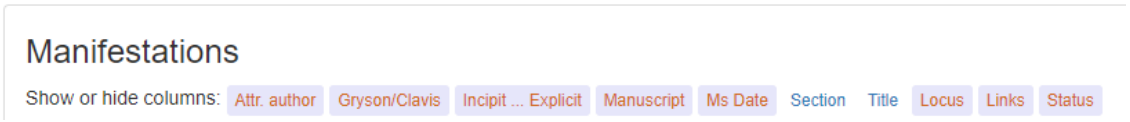


The following screen to browse through and/or filter manifestations is shown:



For all 'Browse/Filter' screens the following general lay-out and functions are applicable:

- **Upper part**: the menu bar. From left to right you see PASSIM followed by your username, the dropdown menu's and 3 general buttons.
  - This is a toggle button. Clicking it shows – in a pop-up screen - a short description of the ways you can filter the PASSIM database content. Click it again to hide the pop-up screen.
  - This is a toggle button. Clicking it hides the filter sub screen so you can see more of the listed output. Clicking it again shows you the filter sub screen again.
  - This is a toggle button. Clicking it shows a row of column names that you can select or deselect. In this way you can focus on the information that is important to you. Clicking the button again hides the row you can select from.
    In this example (Manifestations) this row of columns looks like this:

    The red columns are visible by default. The blue ones are hidden by default. Clicking a column name toggles between visible and invisible.

  Additionally, the path you followed is visible on the lefthand side of the menu bar. You can use this path to retrace your steps.

- **Middle part**: the filter sub screen. Here you can use filters to search specific content in the PASSIM database. The following buttons are available on this sub screen.
  - Search After you selected your filters, you click this button to execute the search. The output will be shown in the output sub screen. More on search options: see 'Filter Options' in this guide.
  - Clear Clicking this button clears all your filters. You can then apply new filters on the results of your previous search. If you want to go back to the total list of all

manifestations (in this example) then you can click the 'search' button after you have first cleared all your filters ('clear' button).

- You can save the output of your search by means of the 'basket' function of PASSIM. More on this topic in the section 'Saving your results'.

When performing searches, you will see some more buttons appearing in the filter sub screen. The function of these buttons will be explained in the section 'Filter options'.

- **Lower part**: the output sub screen: This shows the output of a search. If no filters are used all the manifestations (in this example) are shown. If filters are used, then you will find the results in this sub screen after you clicked the 'search' button.
  Above the output list you will see the following button:

This is a toggle button ('row select button'). Clicking it makes it possible to select one or more rows from the output. Before every row you will see a 'check box'. While selecting one or more rows from the output a counter appears in the 'row select button'. Also, some options appear to the left of the toggle button when you do select rows. With them you can:

- Deselect all selected rows.
- Save the selected items as 'saved item' in MyPASSIM. The saved items are indicated with a blue 'star' sign (★) in the output list. See 'Saving your results' and 'MyPASSIM' for more information.
- Add the selected items to your Basket. See 'Saving your results' and 'MyPASSIM' for more information.

Clicking the 'row select button' again will hide the selection options.

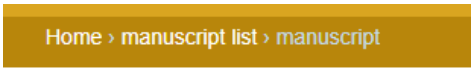
If you are just browsing through the content of the PASSIM database see the 'Browse options' chapter in this user manual.

Help navigating

To help you navigate through the PASSIM Research Tool screens you can use one or more of the following methods.

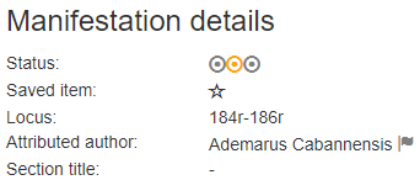
- Back arrow/forward arrow browser
  Using the back or forward arrow of your browser brings you to the previous or next browser screen.

- Path backtracking
  You can use the backtracking path in the top bar (left upper side of the screen) to jump back.
  Example:



Clicking ‘manuscript list’ brings you back to the manuscript list (ALL manuscripts!).
Clicking ‘Home’ brings you back to the PASSIM home screen.

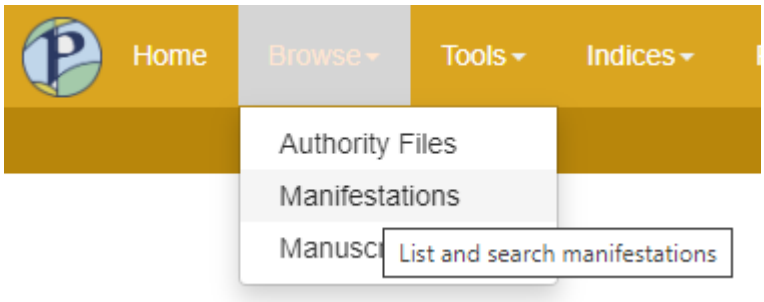
- Some PASSIM screens have specific buttons. An example: if you are in the detailed information screen of a manifestation then you will see two buttons in the upper left corner of the screen.



The double left arrow will bring you back to the screen with the list of items you came from (in this example the list of manifestations).
The ‘Manuscript’ button opens the details screen of the manuscript the manifestation can be found in.
N.B./ If you click the double left arrow button on the manuscript details screen you will go to the list of manuscripts. Not the list of manifestations! Use the back arrow of your browser if you want to return to the list of manifestations.

Browse options

You can browse through sermon manifestations, manuscripts, historical collections and Authority Files that are in the PASSIM database. You can also browse through a lot of other information. Just go to main menus in the upper bar of the PASSIM screen and choose the relevant information category.



To support browsing the following options are available.

- Scroll bars. Use the scroll bars on the righthand side of the screen to move up or down the list of items.
- Use the 'page numbers' to jump to a specific screen page in the list of items. The 'page numbers' can be found at the right upper and the left lower corner of the screen.

- Sorting the columns. You can change the default sorting of the list of items. Every column with a blue column header can be used for sorting.

In many cases you can get more detailed information on an item in the list view by clicking one of the fields in the rows of the list.

Filter options

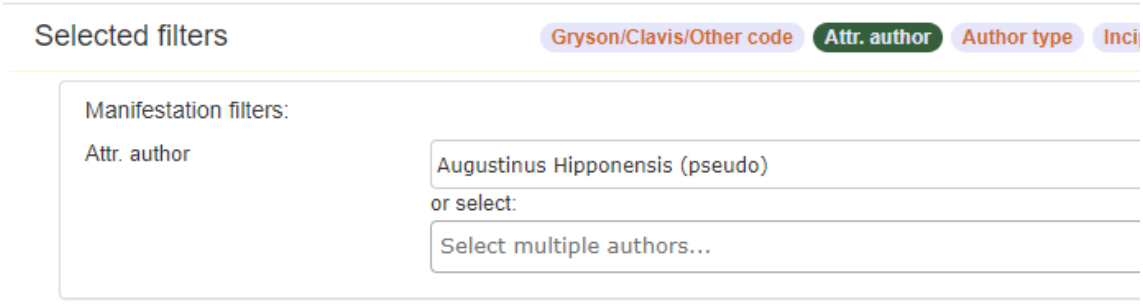
A filter sub screen offers the possibility to filter the content of the PASSIM database extensively. The most important entry points for filtering are the Manifestations, Manuscripts, Authority Files, Historical Collections, Keywords, Feasts and Bible References.

Simple query

If you want all the manifestations in the PASSIM database that:

- Have as attributed author 'Augustinus Hipponensis'

you select the 'Attr. Author' filter and use the filter field to fill in the name. A dropdown list appears as soon as you start typing the name. You can either type the name in yourself or you can choose from the dropdown list.

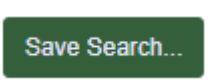


After you hit 'Search' the result of the search operations is shown in the lower part of the screen.

When hovering over the resulting list you will notice that in a row sometimes your cursor changes from an arrow to a 'hand'. In that case you can click on the text, and you get to more detailed information related to that item.

Looking at the filter sub screen on your computer you will see two more buttons that have appeared.

Clicking this button copies the URL of your search to the clipboard.



Clicking this button copies the output of your search to MyPASSIM. You have to give the search a – for you – meaningful name.

You can also put the results of the query in the Basket and save the content for later use.

See the chapter 'Saving your results' for more information on these options.

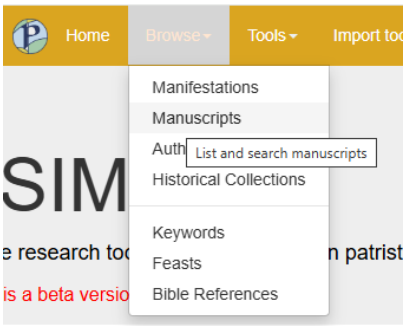
Complex query

The use of filters and Boolean operators makes it possible to perform complex queries in the PASSIM database. The Boolean operators can be used in many filters but also in the Basket. The following examples are an illustration of complex queries.

1. Research question: I want a list of all manuscripts that contain AU s 172 AND AU s 173

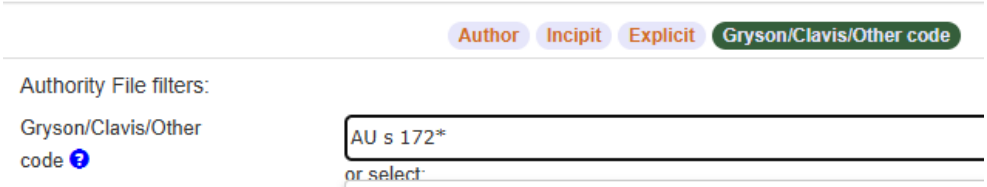
   Perform the following steps to get to that result.

   a. Go to the manuscripts list.

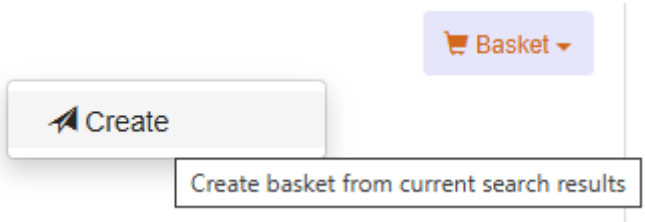


   b. Select the 'Authority File …' filter option in the filter sub screen.

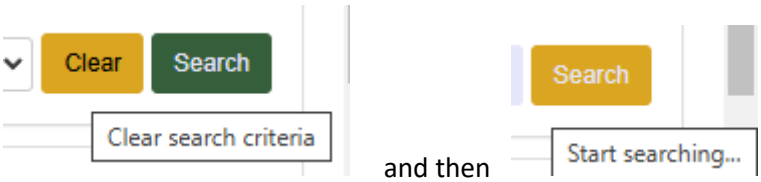
   c. Select filter 'Gryson/Clavis/Other code' and fill in 'AU s 172*'.



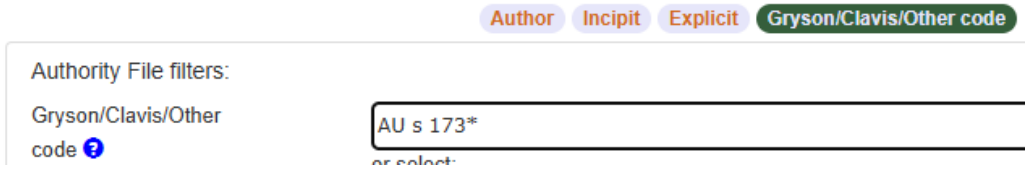
   d. Before you hit 'Search': check if your Basket is cleared! If so: hit 'Search'. The result will be a list of manuscripts containing AU s 172. Save them in the Basket.



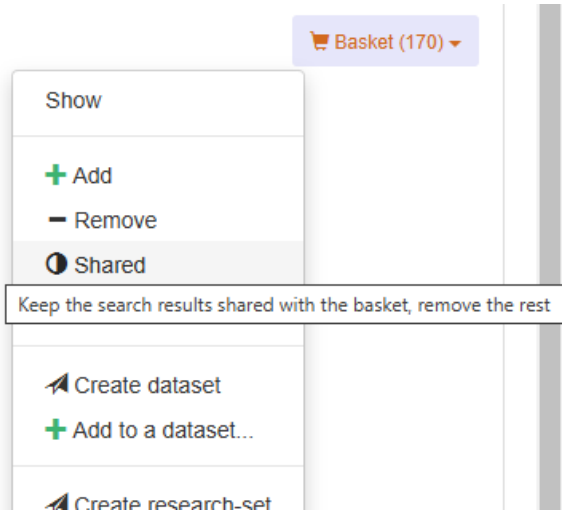
   e. Clear all filters and go back to the full list of manuscripts.



f. Choose again the 'Authority File …' filters. Select the 'Gryson/Clavis/Other code' filter and fill in 'AU s 173*'.



g. Hit 'Search'. The result will be a list of manuscripts containing AU s 173. To create a list containing AU s 172 AND AU s 173 go to the Basket menu and choose the option 'Shared'. This function retains in the Basket only those manuscripts shared between what is already in the Basket and the output list from your most recent query.



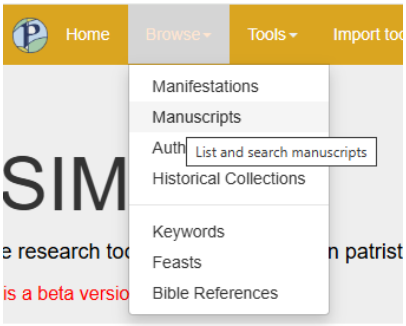
h. After you have done this, the Basket contains only the manuscripts that contain both AU s 172 AND AU s 173.

i. You can choose to look at/leaf through the results (choose 'Show' in the Basket menu) AND/OR save the results in the basket in a dataset for later use (choose 'Create dataset' in the Basket menu). This dataset can be found in MyPASSIM.

2. Research question: I want to know which Caesarian sermons were attributed to Augustine in manuscripts dating to the 9th century.

Perform the following steps to get to that result.

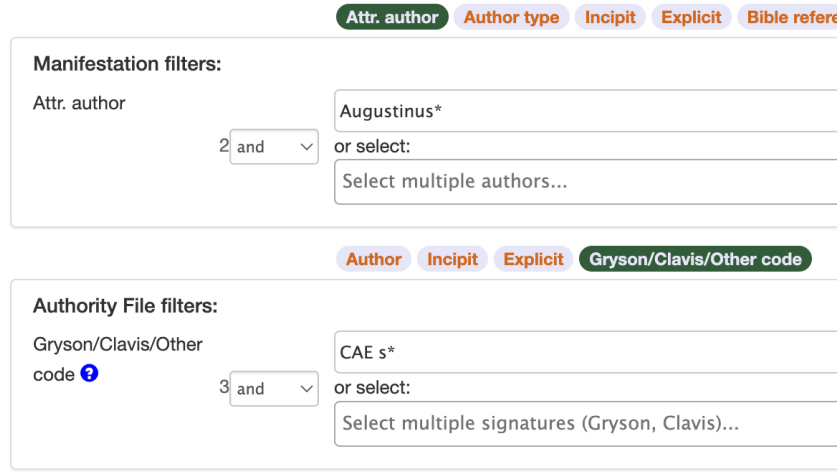
a. Go to the manuscripts list.



b. Select the 'Date range' filter option in the filter sub screen and fill in 800 – 899 (note that filling in '900' would also include manuscripts from the 10th century in your search).
c. Select the 'Manifestation' filter option in the filter sub screen.

d. Select filter 'Attributed author' and type 'Augustinus*'.
e. Select the 'Authority File …' filter option in the filter sub screen.

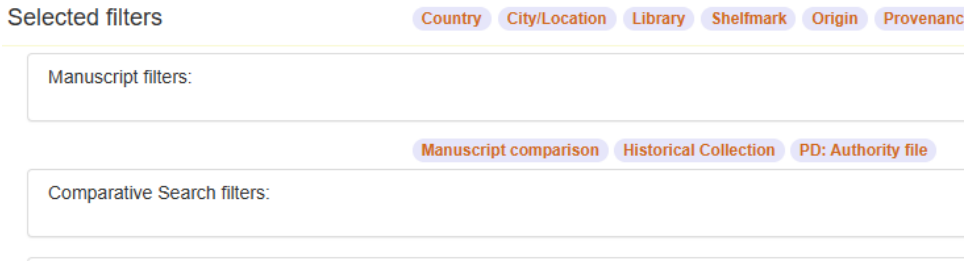
f. Select filter 'Gryson/Clavis/Other code' and fill in 'CAE s*'.



g. Hit 'Search'.
h. The results will be presented as a list view. You can save the combination of filters by generating a URL, or you can save the results by creating a Personal Dataset using the Basket function (choose 'Create dataset' in the Basket menu). This dataset can be found in MyPASSIM.

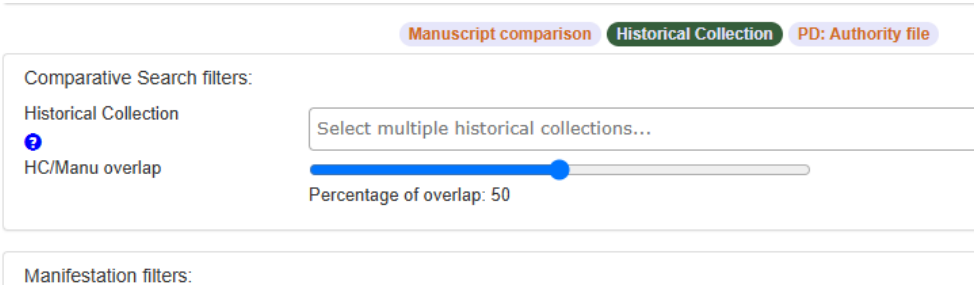
Comparative search

When filtering manuscripts you can choose to use the 'Comparative search …' filter. This option allows you to search through all manuscripts in PASSIM for those manuscripts that overlap to a certain percentage with a selected manuscript, Historical Collection or Personal Dataset of Authority Files (PD).



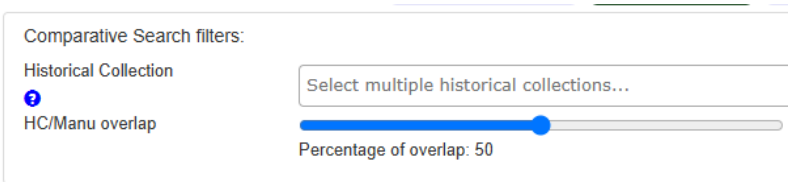
N.B./ This type of search does not take the order or clustering of contents into account, but only compares (linked) sets of AF's.

The slider bar you see when choosing one of these filters is adjustable, so you can choose a percentage of overlap in content.

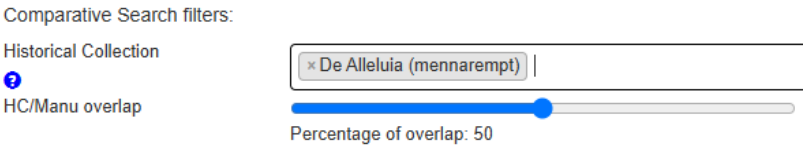


Example: you want to find all manuscripts that have a content overlap of 75% with the Historical Collection '*De Alleluia'.*

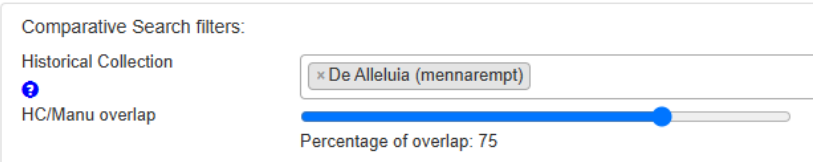
1. Open the comparative search filter 'Historical Collection.



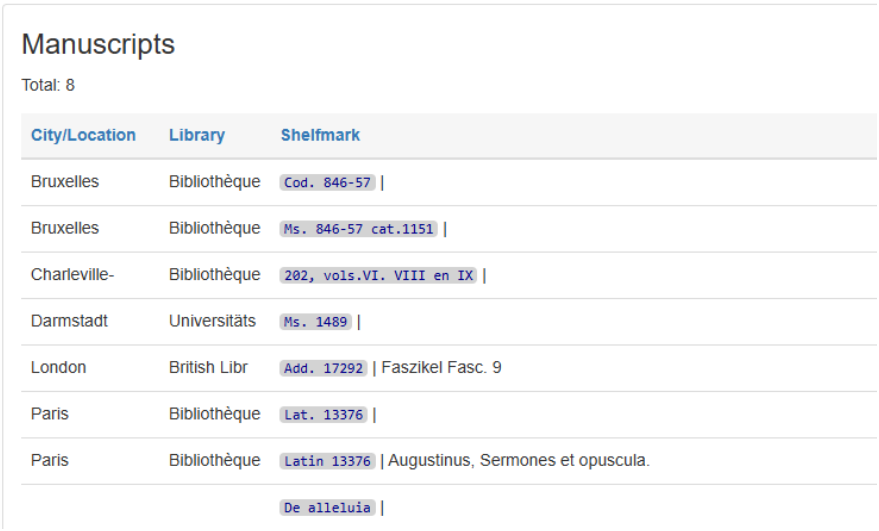
2. Fill in the name of the Historical Collection (use precise name or choose from drop down list).



3. Adjust the slider bar to 75%.



4. Click the 'Search' button. The result will be a list of manuscripts that have 75% overlap with the Historical Collection.



Manuscripts

Total: 8

City/Location	Library	Shelfmark
Bruxelles	Bibliothèque	Cod. 846-57 |
Bruxelles	Bibliothèque	Ms. 846-57 cat.1151 |
Charleville-	Bibliothèque	202, vols.VI. VIII en IX |
Darmstadt	Universitäts	Ms. 1489 |
London	British Libr	Add. 17292 | Faszikel Fasc. 9
Paris	Bibliothèque	Lat. 13376 |
Paris	Bibliothèque	Latin 13376 | Augustinus, Sermones et opuscula.
		De alleluia |

You can of course save these manuscripts as a dataset for further research using the ‘Basket’ functionality. Or launch a DCT from the ‘Basket’ menu.

If you made a dataset with AF’s you can in the same way (using Comparative filter ‘PD: Authority File’) find manuscripts that have an overlap with this dataset. If you use overlap percentage = 100 then you will find all manuscripts that contain all the AF’s in your dataset.

The resulting list of manuscripts can also be saved as a research set and thus be used for further analysis using the DCT. A DCT can also be launched directly from the ‘Basket’ menu.

Saving your results

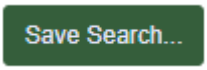
URL

In many screens you will see the following button:

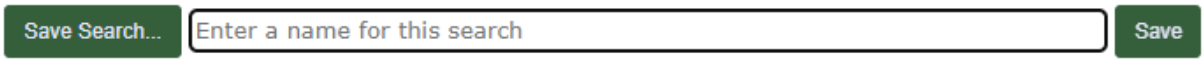
This is always the case when you perform a filter action. When clicking this button, the URL of the search results is copied to the clipboard of your computer. You then can paste this URL in a text, email et cetera for further use. Note that this URL only saves the combination of filters you have selected, not the resulting data. If the dataset is expanded between saving and reusing the URL, the result of the search will be different.

Save search

After you performed a search, you will also see the following button (in the filter sub screen):



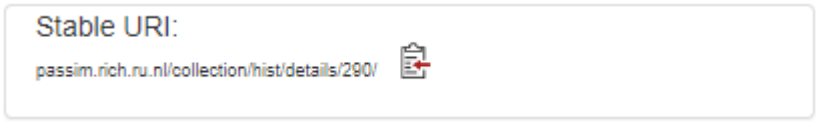
This gives you the opportunity to save the results of your search. After clicking this button, you will be prompted to give a name to your search result:



Hit save after you filled in the name. The search will be saved in MyPASSIM (see that chapter).

URI

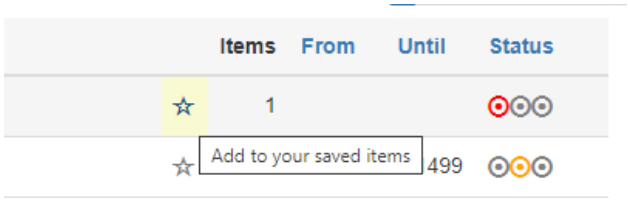
On the detailed information screens of Manifestations, Authority Files and Manuscripts the option is available to copy the URI of the detailed information to the clipboard.



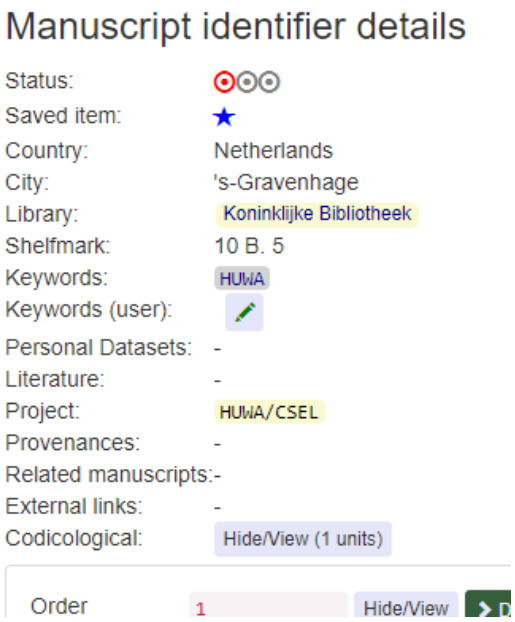
Click the ‘save URI’ button to copy the uniform resource identifier to the clipboard.

Saved items

You can save single items in lists of items. To do that click the ‘add to your items’ symbol in a list of items.



The color of the symbol will change from white to blue. In the detailed information of the item this symbol will be displayed.



Any item you saved in a list screen can be found in MyPASSIM. From there you can go directly to the detailed information of the item by clicking the appropriate title in the list of saved items.

Visualizations

When making one or more network visualization(s) you have the option to save these in MyPASSIM.

To do so click the 'save dialogue' button ( ). Type the name of the visualization you want to save.

The visualization is stored in MyPASSIM. See the chapter on Analysis tools for more information on how to make a network visualization.

Basket

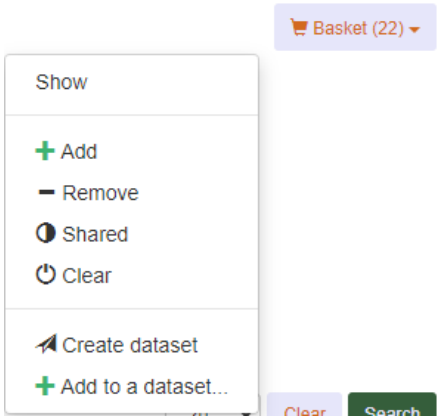
When browsing through the database content and performing searches using filters you will notice the ‘Basket’ button in the filter sub screen. This looks like this:

You can save filtered data in the basket and then decide if you want to save these data in a new dataset or add them to an existing dataset. These datasets can be accessed in MyPASSIM. Datasets can be used to work with later and/or to use as input for DCT analysis (see ‘DCT analysis’).

If your basket is empty, then the following option is shown when clicking the ‘Basket’ button:

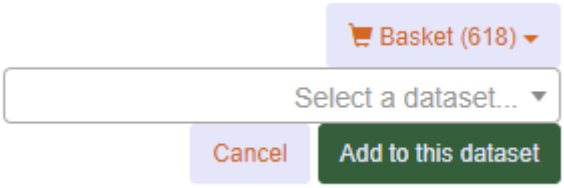
If you click ‘Create’ the content of your filtered list will be copied to the basket. You will see that the ‘Basket’ button has changed. The number of items in the basket is shown. In this example: 22 manifestations.

When you click the ‘Basket’ button again after you used ‘Create’, an extended menu will be presented. This menu is the same when **filtering Manifestations or Authority Files.** These menu options are described below first. In the case of **Manuscripts** there are some more options. These will be described after the general menu options.



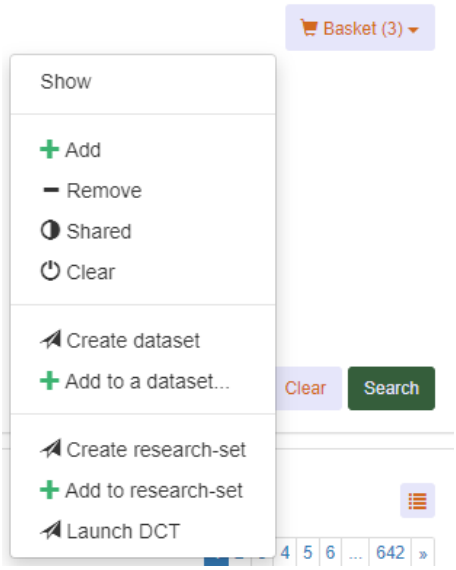
- **Show**. Shows the content of the basket as a list view.
- **Add**. You can perform a new search and add the results to the content of the basket.
- **Remove.** You can perform a new search and remove the results from the results that are present in the basket.
- **Shared**. See ‘Complex query’ (Research question: I want a list of all manuscripts that contain AU s 172 AND AU s 173) for an example of this functionality.

- **Clear**. The content of the basket remains there until you click this option. Then the basket will be emptied. It is important to clear the basket if you decide to compile a new set of database items.
- **Create dataset**. After you have compiled a set of items in the basket you can decide to save these in a personal dataset. PASSIM will automatically give the new dataset a name starting with your username. The new dataset can be found in MyPASSIM.
- **Add to a dataset** … You can also add the basket content to a dataset you made earlier. If you choose this option, you can select one of your personal datasets from a dropdown list.



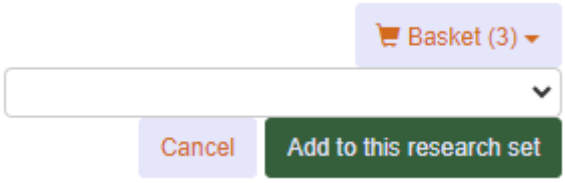
The content of the basket will be added to the dataset of your choice and the augmented dataset can be found in MyPASSIM.

When **filtering manuscripts** and saving them in the Basket the dropdown menu has some more options.



These options are:

- **Create research-set**. If you choose this option, you create a research set that can be used to perform a Dynamic Comparative Table analysis. PASSIM will automatically give the new research set a name starting with your username. The new research set can be found in MyPASSIM.
- **Add to research-set**. You can also add the basket content to a research set you made earlier. If you choose this option, you can select one of your research sets from a dropdown list.



The content of the basket will be added to the research set of your choice and the augmented research set can be found in MyPASSIM.

- **Launch DCT**. Choosing this option starts the DCT analysis directly from the content of the basket.

Analysis tools

Introduction

The PASSIM Research Tool provides the following text analysis tools:

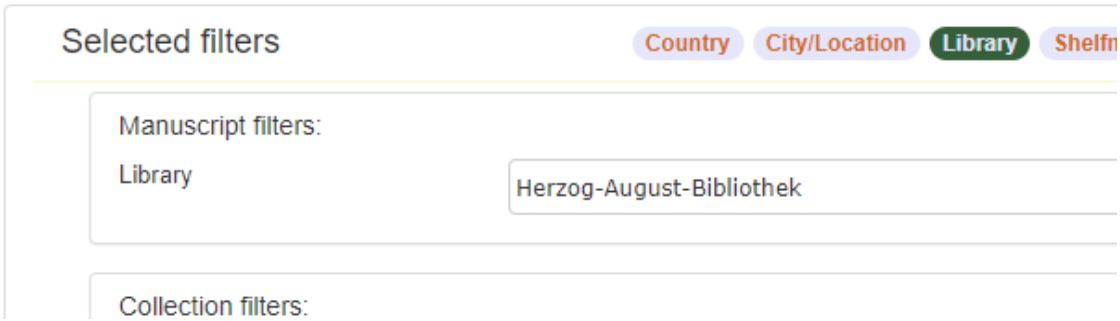
- Network analysis
- Dynamic Comparative Table (DCT) analysis
- Cluster Analysis

Network analysis

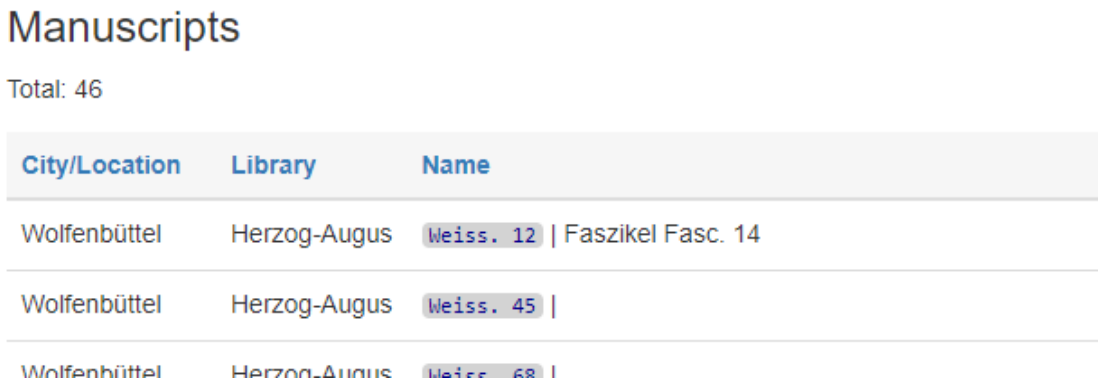
How to start your network analysis

The network analysis starts from the Authority File details screen. The three main entry points in the PASSIM database to get to a specific AF are:

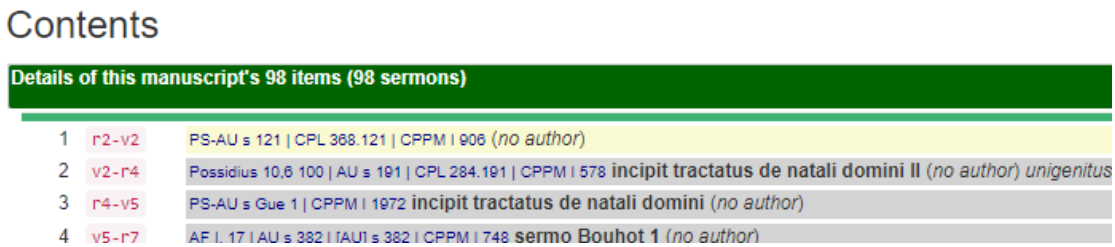
1. **Browse -> manuscripts**. Example: Use the 'Library' filter and fill in 'Herzog-August-Bibliothek'. You will get (after clicking the 'Search' button) a list of all the manuscripts in that library.



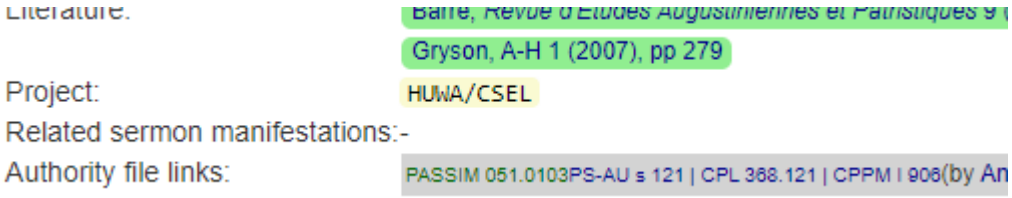
Browsing through that list you will find a manuscript with the name 'Weiss. 12'.



After clicking on the name of the manuscript 'Weiss. 12 | Faszikel Fasc. 14' you will get detailed information. In the content of the manuscript (scroll down the screen) you find the sermon manifestation 'PS-AU s 121'. This is one of the sermon manifestations in this manuscript.

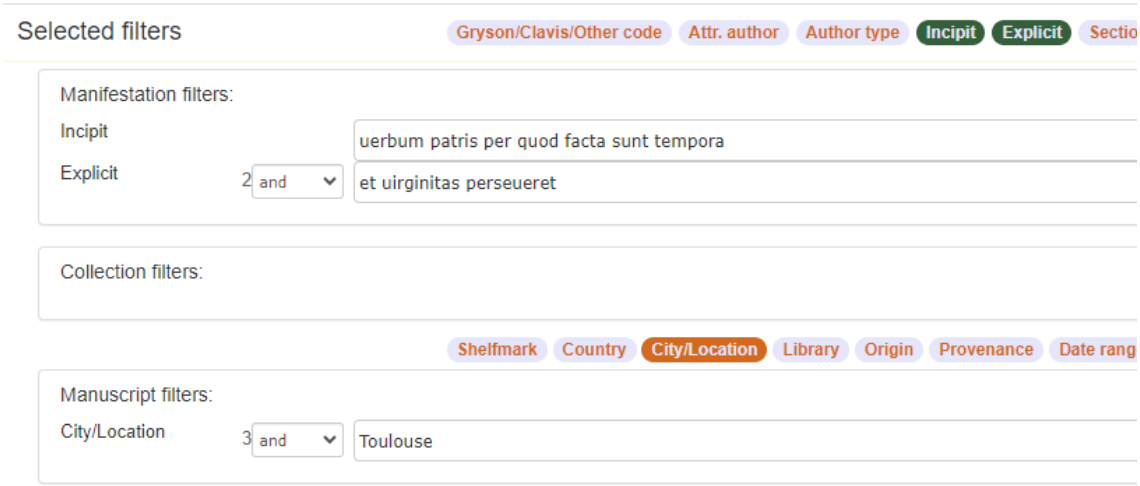


Clicking the Gryson-Clavis code 'PS-AU s 121' brings you to detailed information on the sermon manifestation. An important information is the fact that the sermon manifestation is linked to the 'PASSIM 051.0103' Authority File.

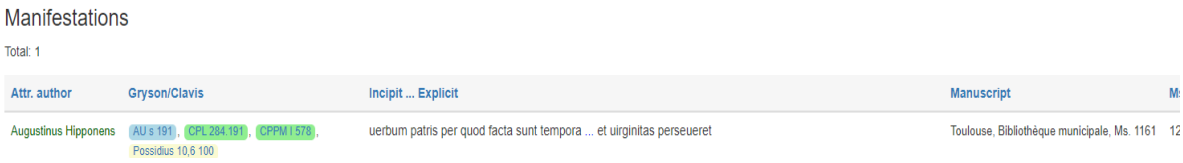


More information on the Authority File 'PASSIM 051.0103' can be found by clicking the PASSIM-code.

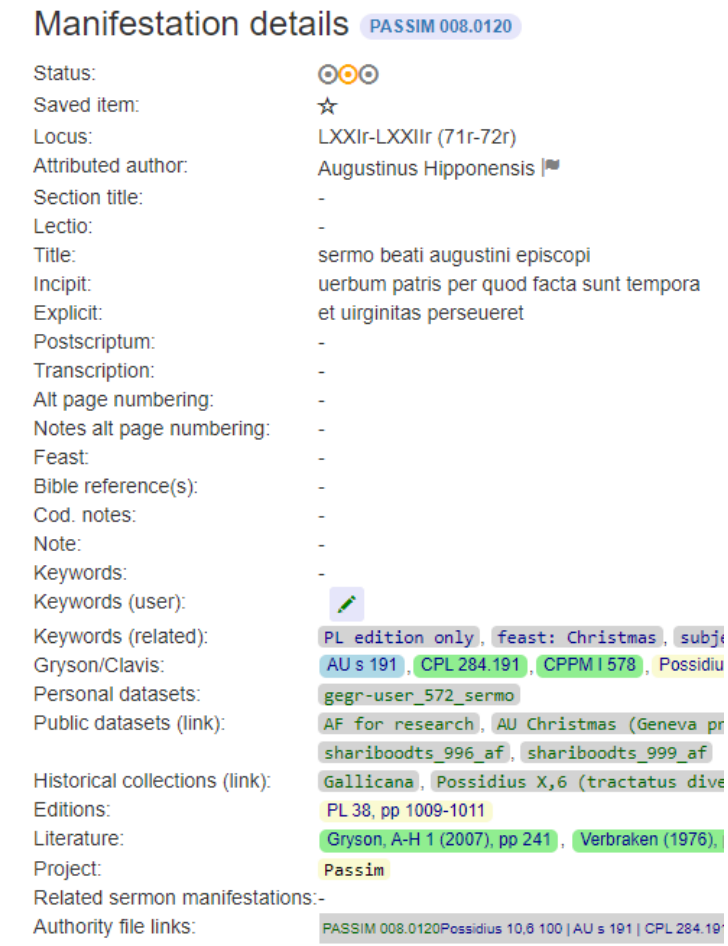
2. **Browse -> manifestations**. Example: You know of a sermon manifestation that has a specific 'Incipit' and 'Explicit' and resides in a library in Toulouse, France. Fill in the filters in the search sub screen of the list of manifestations



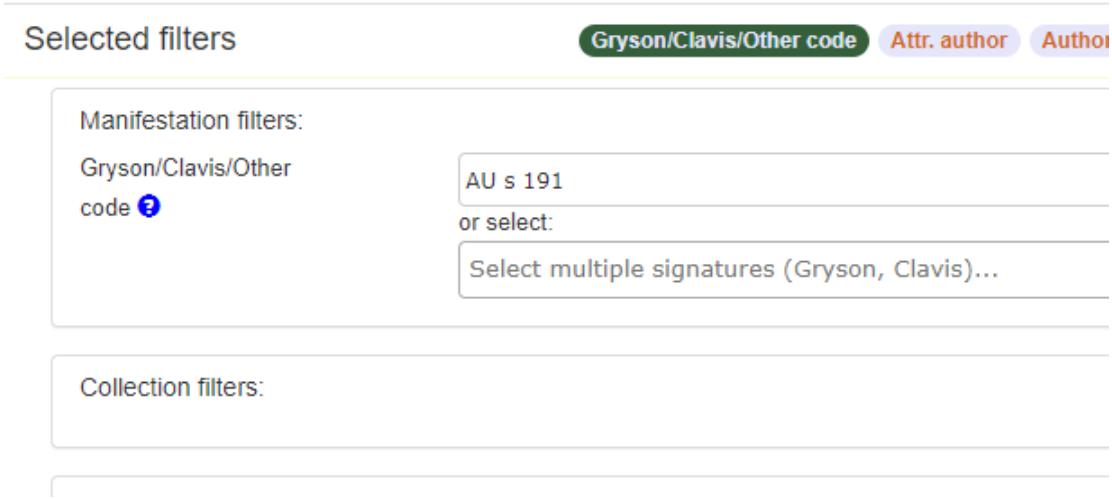
The result will be one sermon manifestation.



Clicking the 'Attr. author' field will show you the details of this sermon manifestation. Including its Authority File link 'PASSIM 008.0120'.



3. **Browse -> manifestations**. Example: you know the 'Gryson/Clavis' code of a sermon manifestation. Using this code to filter the list of manifestations results in selection of all the manifestations have this 'Gryson/Clavis' code in the PASSIM database. For instance, using Gryson/Clavis code 'AU s 191' as filter



Results in a list of manifestations with that 'Gryson/Clavis' code in the database. You can explore this list of manifestations and find the linked Authority Files in the detailed information of the manifestations.

Example of network visualization

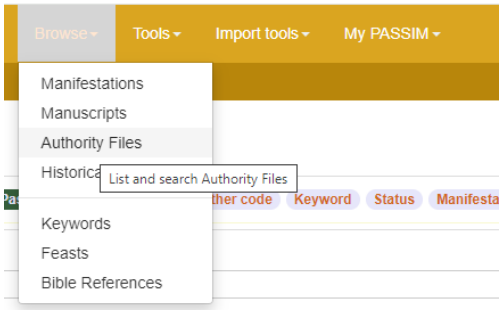
In this example of a network visualization the pseudo-Augustinian sermon printed under the name 'App. 121' (hereafter PS-AU s 121) is used. A reflection of the scholarly tradition and underlying the network visualizations that follow, with reference to consulted literature and editions, can be found in the PASSIM Research Tool under PASSIM code 'PASSIM 051.0103'. The example focuses on textual overlap between the Authority File and other sermon manifestations.

N.B./ An in-dept analysis of PS-AU s 121 and the use of network visualizations for analysis in PASSIM can be found in:

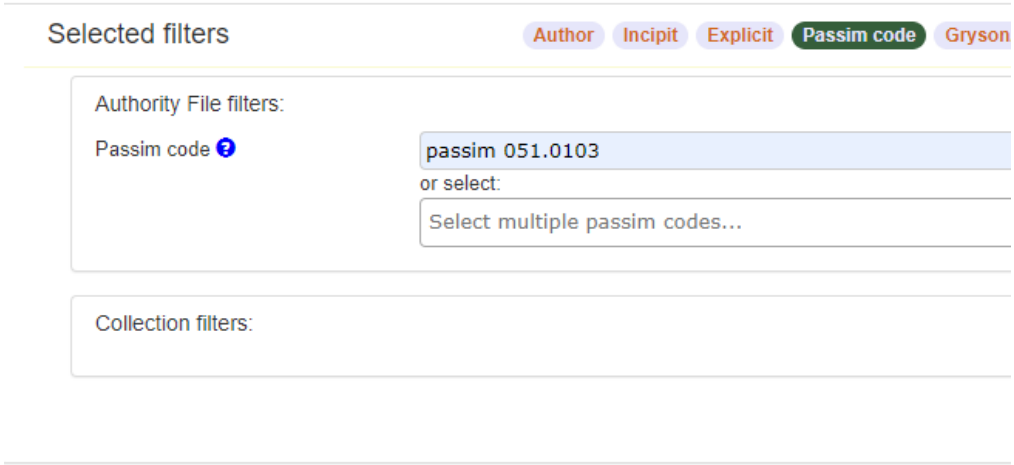
> Denis I. & S. Boodts, 'The pseudo-Augustinian S. App. 121 and its medieval textual connections. A testcase for the development of network visualizations in the PASSIM research tool', *Journal of Historical Network Research*, 9 (2023), 1-35 (DOI: https://jhnr.uni.lu/index.php/jhnr/article/view/133).

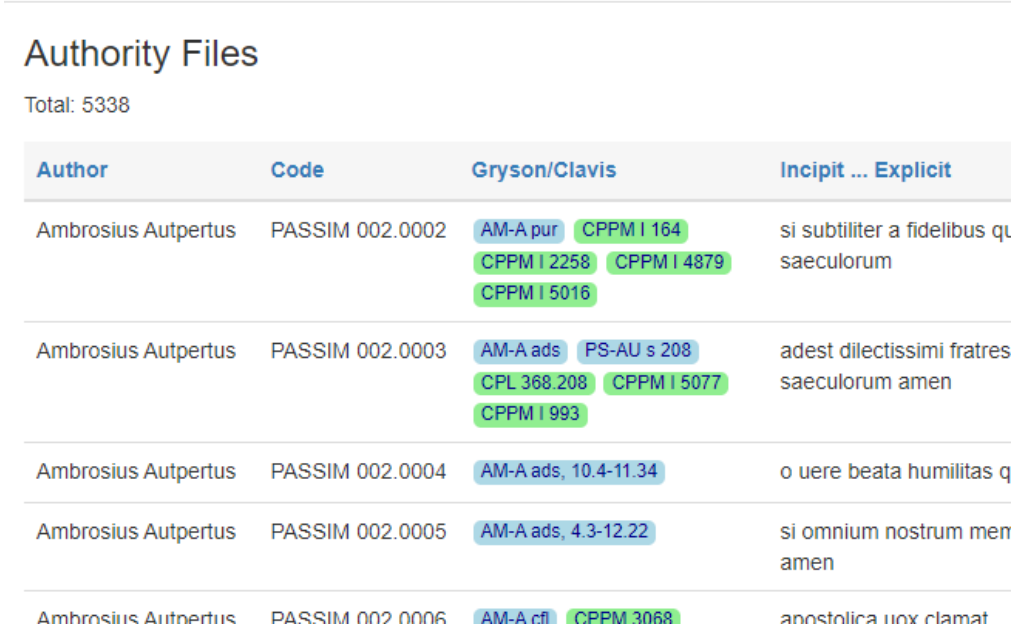
N.B./ It is important to 'play' with the functionality presented. Try it out. In some instances, in the description below you are encouraged to do some 'trial and error'. For instance, to get a more readable graphical result. This is indicated with '**T&E/**'.

To get to the detailed information choose 'Browse -> Authority Files'.

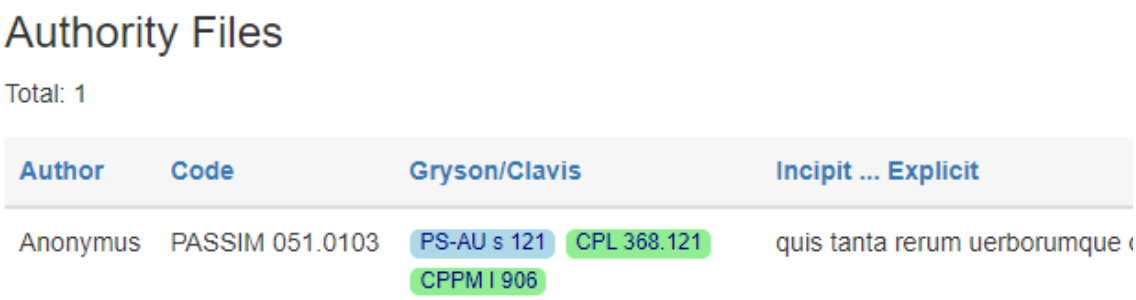


In the resulting list of Authority Files, filter with PASSIM code 'PASSIM 051.0103'.

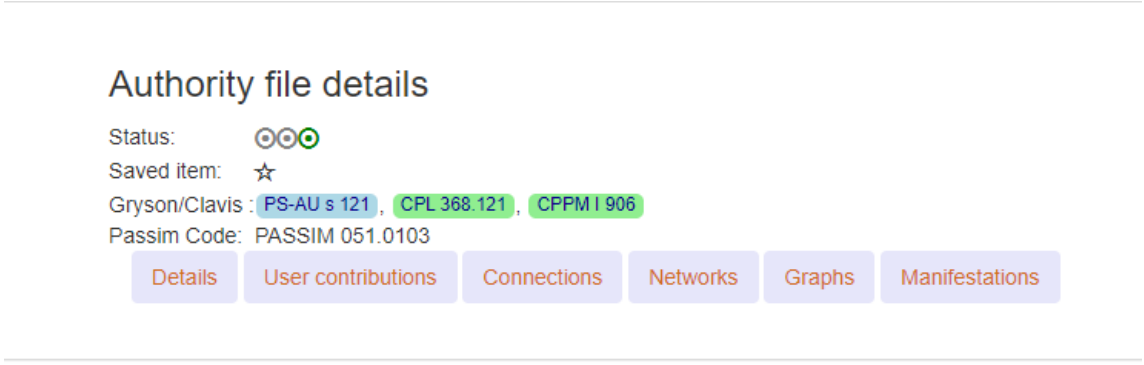




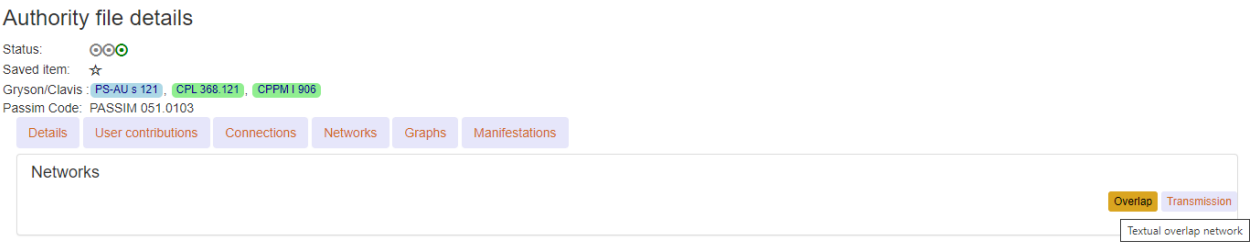
The result (after clicking ‘Search’) will present you the general information on the Authority File ‘PASSIM 051.0103’.



Clicking on the information fields in the ‘Author’, ‘Code’ or ‘Incipit … Explicit’ column of the list information brings you to the detailed information of ‘PASSIM 051.0103’.

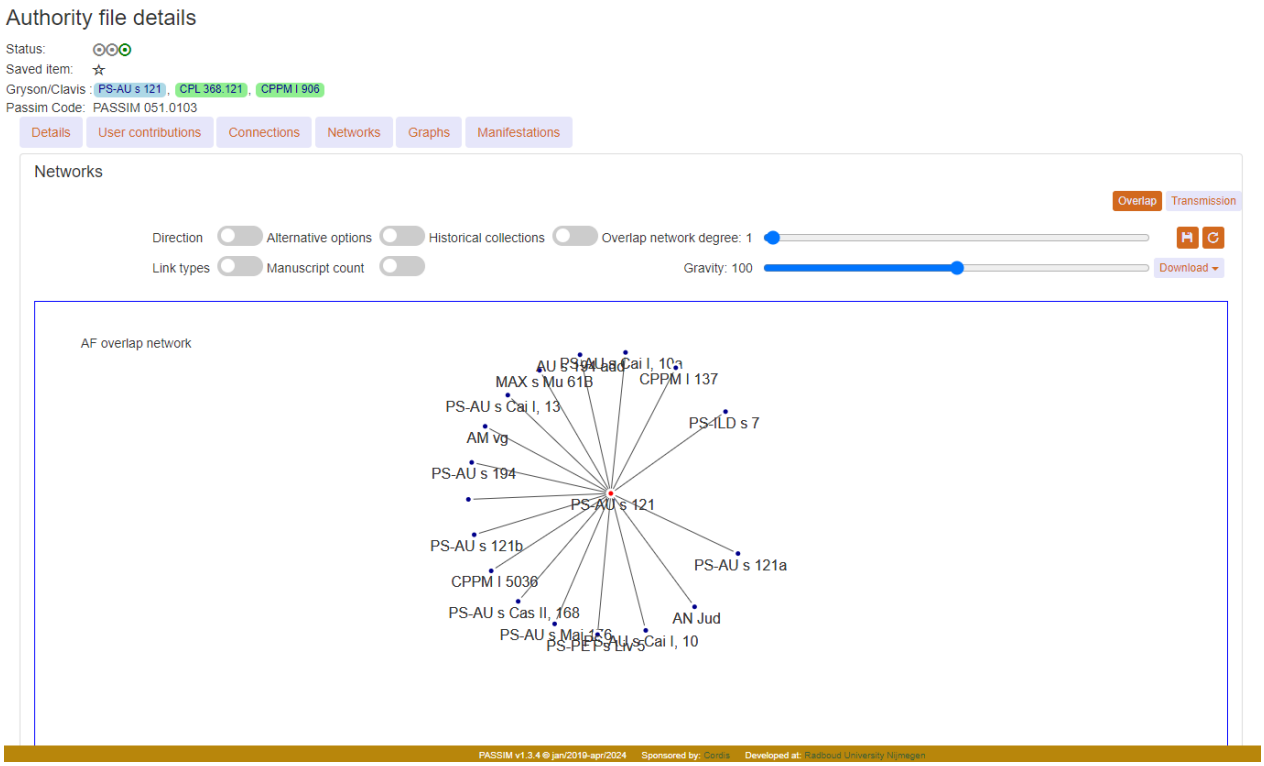


By default, the detailed information is presented in ‘collapsed’ form. For the purpose of the example click ‘Networks’ and the screen with network analysis options will become available. Choose ‘Overlap’ for the textual overlap network functionality.

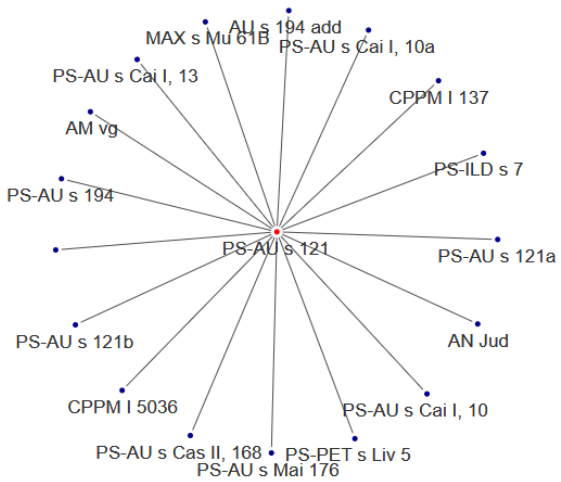


The textual overlap network screen is shown below.

As you can see there is already a textual overlap network visualization available. This network represents the Authority Files that are directly connected to 'PASSIM 051.0103' (**overlap network of degree = 1**). It is the textual overlap between 'PASSIM 051.0103' and 17 other AF's. The list of the connected AF's with overlap degree = 1 can be made visible by clicking 'Connections'.

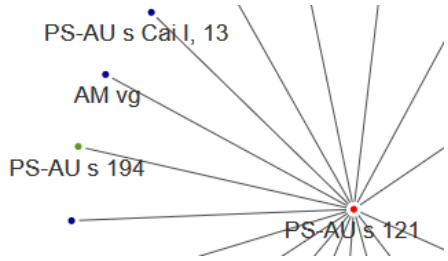


T&E/ To get a better 'picture' of the network you can zoom in/out using the scroll wheel of the mouse and/or you can drag one or more AF's in the picture by clicking on them, holding the mouse button down and drag. By doing so your picture can become more readable:



Hovering over the lines between two AF's shows by default the quantitative link (link type), qualitative link (specification = direction) and notes (if available).

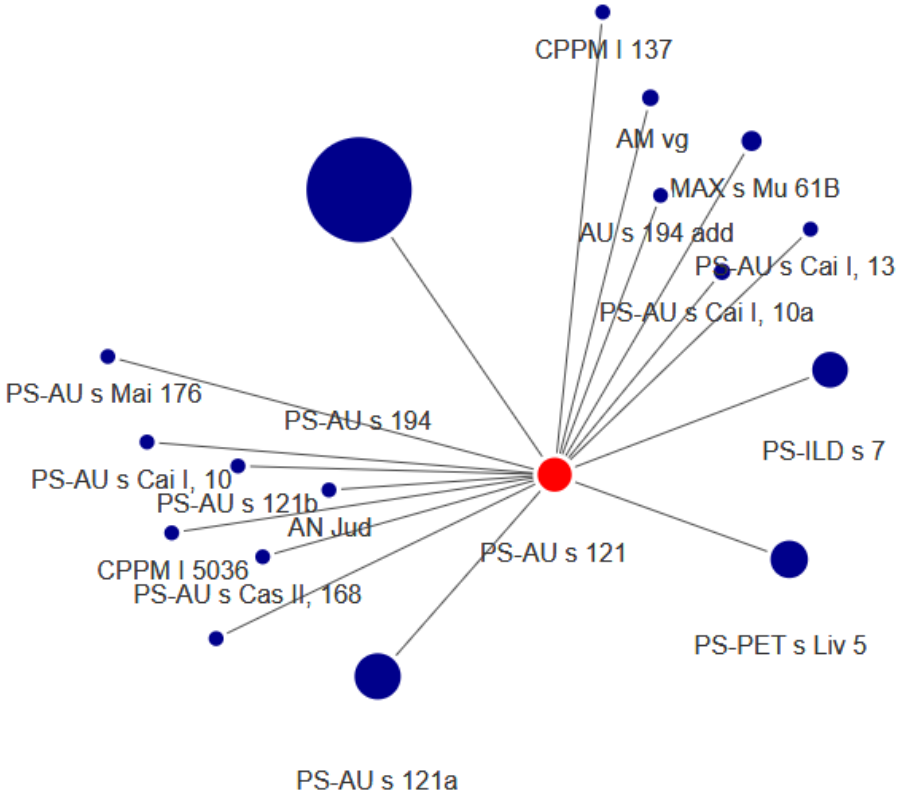
You can choose to highlight a specific AF by changing its color. Click on the colored dot of an AF. Choose the color you want. In this example 'PS-AU s 194' stands out because it was given a green color.



The options for the user to show/hide information in the network diagram are:

- Direction (of the connection)
- Link type
- Manuscript count
- Historical collection

T&E/ Try the different options and see what the result(s) is/are! Below is an example when choosing to show the 'Manuscript count'.



T&E/ Explore what happens if you hover over the different 'bullets'!

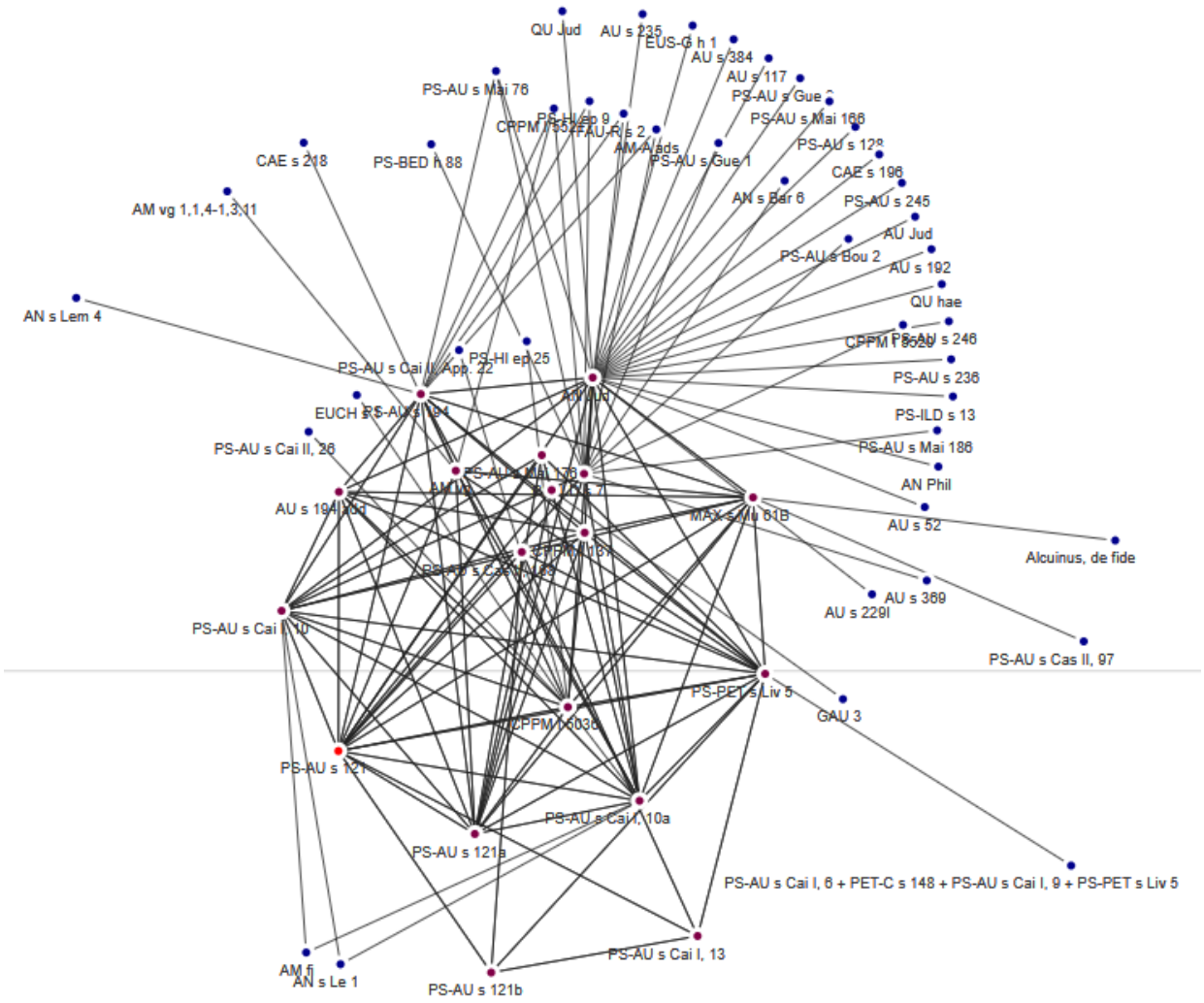
You can get a step further by dragging the slider of ‘Overlap network degree’ to the right until the network degree reaches ‘2’.

Do not forget to click the ‘Update/refresh’ button

The network visualization you get is an **overlap network of degree = 2**. This visualization includes all the authority files that demonstrate textual overlap with PS-AU s 121, and all of the authority files linked to this first set, i.e. those sermons that share texts with the sermons connected to PS-AU s 121 but not with PS-AU s 121 itself. In the network visualization, the starting point (PS-AU s 121) is indicated in bright red. The first-level nodes are burgundy and the second-level nodes are dark blue.

You can of course change colors of nodes so as to highlight those which are of special interest to you. Use zooming and/or dragging to get a better overview of the links between nodes.

The second-degree network visualization offers an overview of all sermons that could conceivably share a common source with the sermon this example started with (PS-AU s 121).



N.B./ Note that the information in the visualization is limited – at this time – by three 'deficiencies':

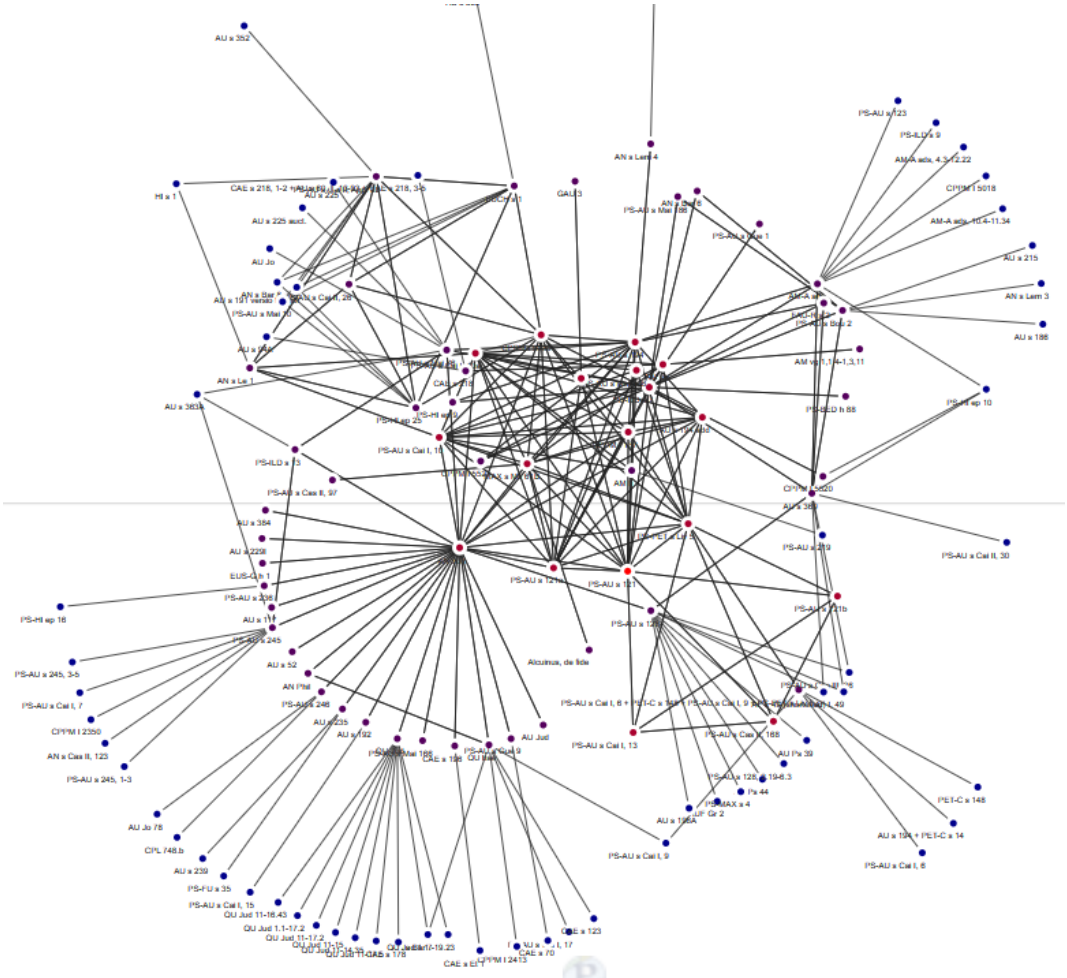
- The network has no nuance: rather, every link type is represented by the same type of edge.
- The network does not contain any information about the manuscripts. If included these manuscripts would provide context to the textual connections between the sermons.
- The network is undirected, not offering any information on which sermons are the models, and which are the derivations.

More on this can be found in the article of Denis I. & S. Boodts mentioned above.

Network visualizations of degree 3 and higher are also possible. But these become vastly more complex and expansive. The connection with the sermon that formed the starting point (PS-AU s 121) is flimsy. However, there are several gains to be had.

- The network visualization presents in one view what would be a highly laborious task to puzzle together from reference works and secondary literature.
- The visualization can be used to explore the network for interesting case studies. This is another way to use the network visualization tool.

Below is a (partial) example of a network visualization of degree 3.



DCT analysis

How to start your Dynamic Comparison Table (DCT) analysis

As input for a DCT you need a research set. The following items can be used in a research set (separate or in combination):

- Manuscripts
- Authority Files

  For these items you can use the basket functionality and then save the items in the basket as a research set. In doing so you will be automatically directed to the detailed information page of your newly created research set. You can alternatively also start the DCT function directly from the basket menu.

- Historical collections

  If you want to add historical collections to the content of the research set, you have to add them by using the 'saved items' functionality of PASSIM or on the detailed information page of your created research set.

There are two ways you can make a research set in PASSIM:

1. Start from the 'list' and 'filter' functionality and use the basket functionality (manuscripts and/or Authority Files only) and – when adding historical collections – the 'saved items' functionality.
2. Start from the detailed research set information on the DCT Tool page and use the functionality presented there. For a large part you use the same functional steps.

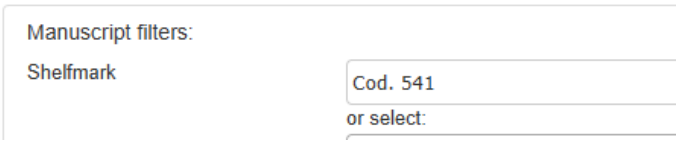
Both processes are described below using as an example the following mixed input for the research set:

- The manuscript with shelfmark Cod. 541 (Lectionarium, Bibliotheca del Seminario Vescovile, Padova)
- Historical collection Paul the Deacon
- Historical collection Alanus of Farfa

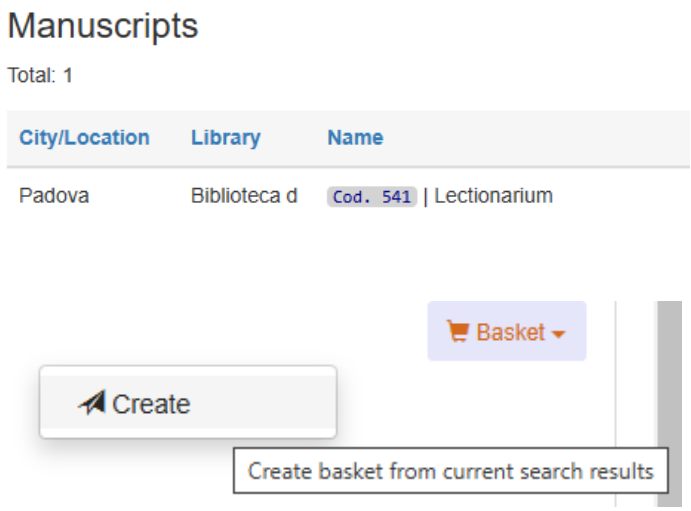
Making a research set using 'list', 'filter' and 'saved items' functionality

Start browsing manuscripts and filter the manuscript with shelfmark 'Cod. 541'. Save this item to your basket. Save the content of the basket as research set.

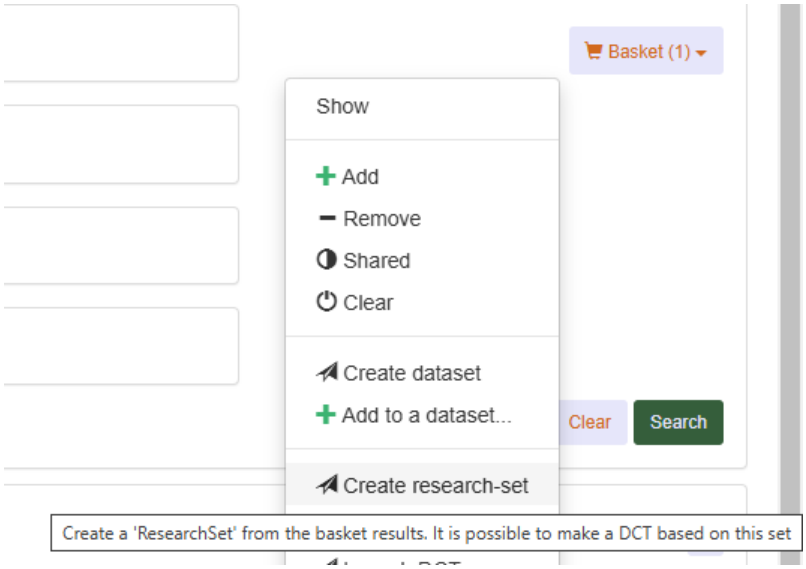
a. Browse and filter



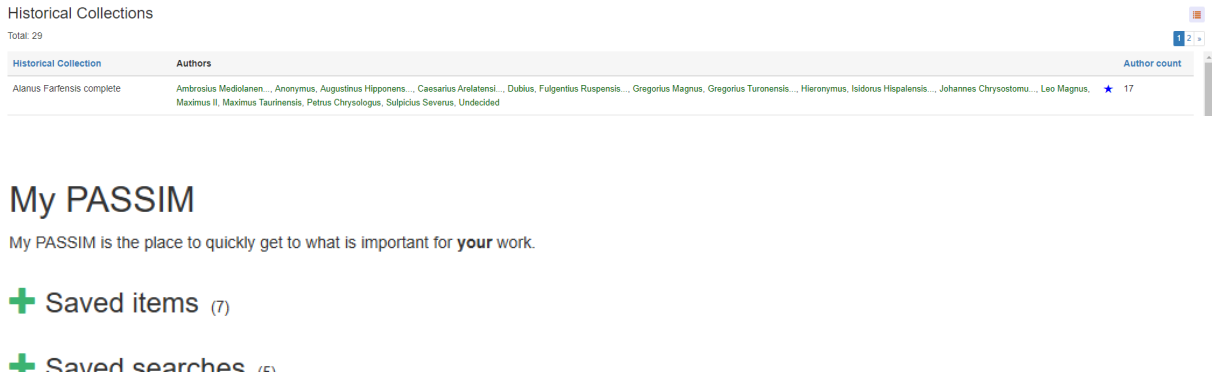
b. Add search result to basket

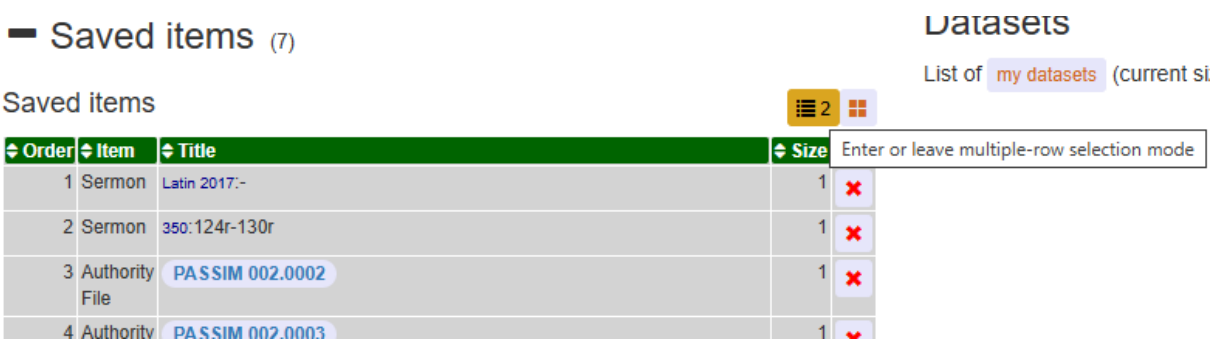


c. Save the basket content as research set. You will be directed to the detailed information page of your newly created research set.

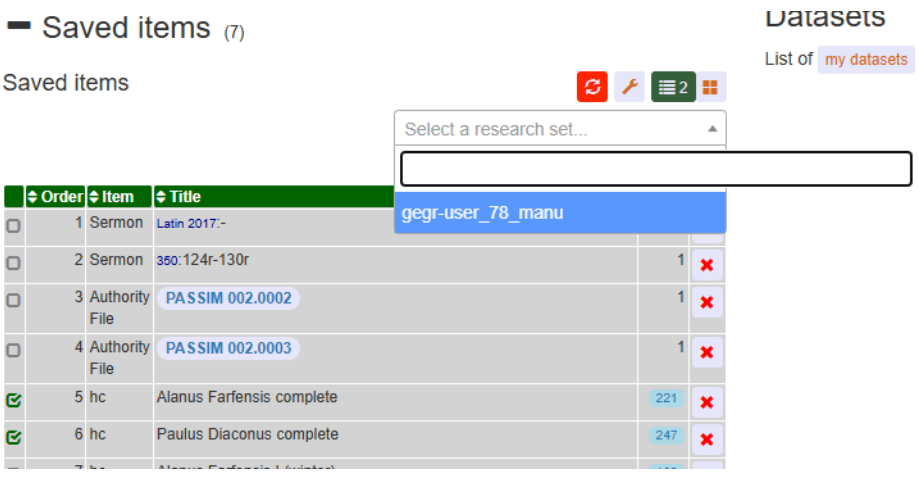


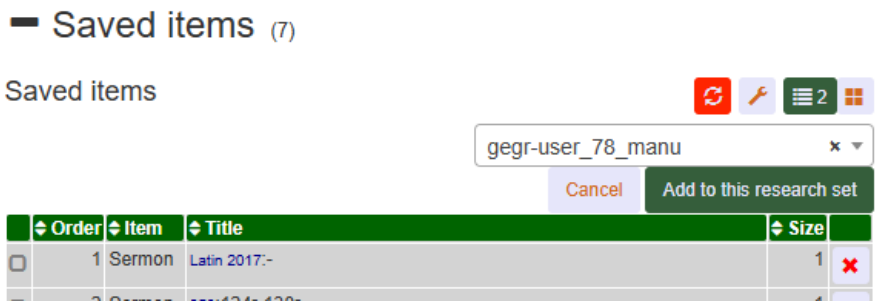
d. Go to the list of Historical Collections and mark the Historical Collections of Paul the Deacon and Alanus of Farfa as 'saved items'. In MyPASSIM you can find these saved items and you can add them to the research set you just created.





e. Enter multi-row selection mode and select the historical collections you want to add to the research set. You will be asked which research set you want to add the items to. Select a research set from the dropdown list (click the 'down arrow'). And confirm the name you chose.

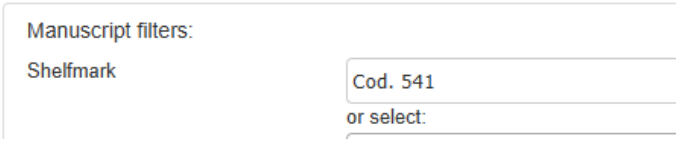




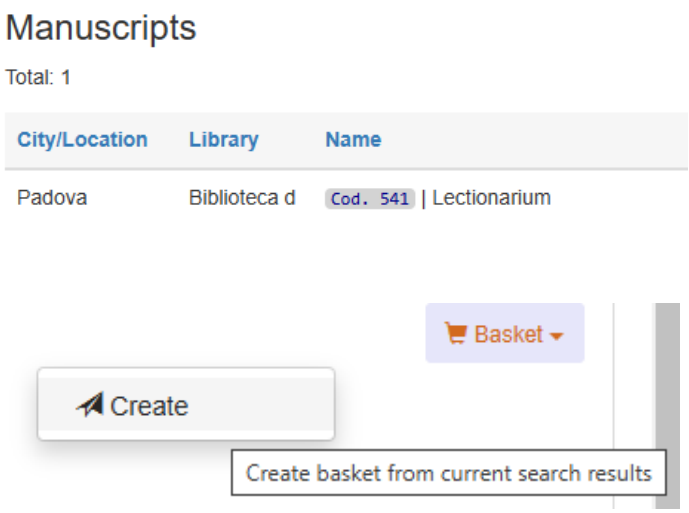
The research set containing the 3 items is created. Now you can use the research set for your DCT analysis. See paragraph ‘DCT Tool page’.

Making a research set from the DCT Tool Page

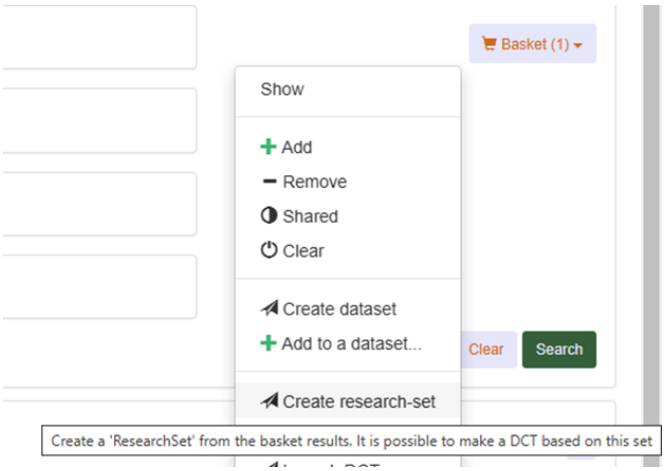
a. Browse and filter

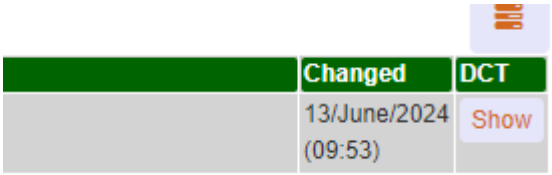


b. Add search result to basket



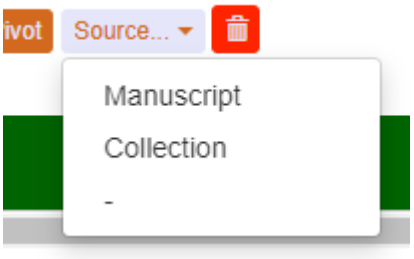
c. Save the basket content as research set. You will automatically be directed to the detailed information page of your newly created research set. Click the ‘Show’ button in the DCT list shown.





d. The DCT of your research set is presented. You can add sources to your DCT by clicking the ‘source’ button.

e. Choose ‘Collection’ from the drop down list.



f. Choose the Historical Collection (HC) of Paul the Deacon (Paulus Diaconus) and click ‘add’. Repeat this step for the HC of Alanus of Farfa. The DCT is now complete for this manuscript and the two HC’s. It is calculated and shown directly.

Comparative tool

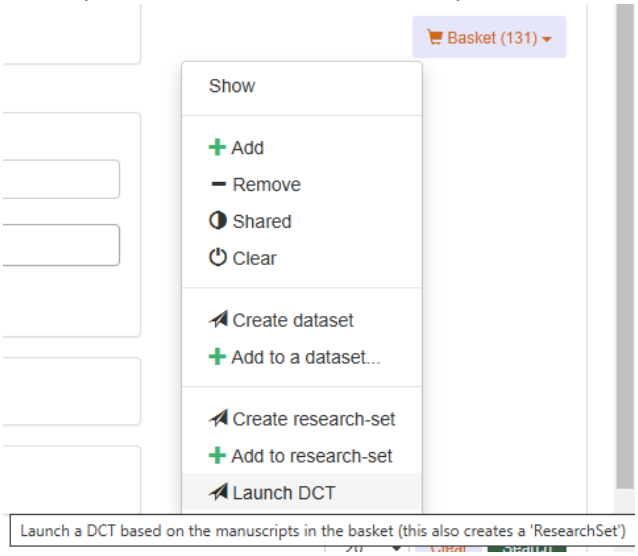
After making the research set you can start the DCT analysis.

N.B./ You must be aware of the following caveats when using the Comparative tool:

1. Matches are based on AF-connections. There is a possibility of different realities behind these connections.
2. If large manuscripts are matched: keep in mind that comparison is made on numbers of overlap.

The DCT analysis can start in the following ways:

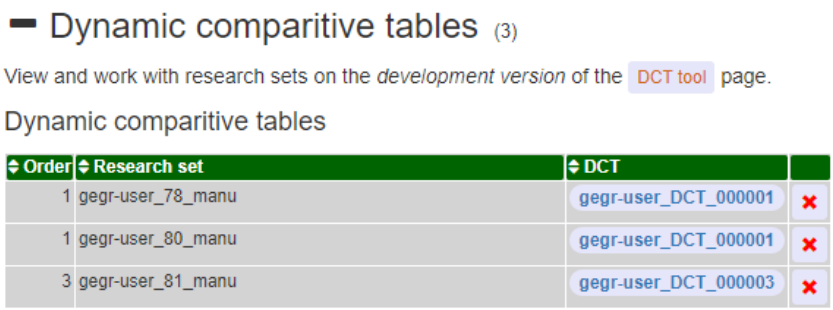
a. Directly from the 'Basket' menu after you have filtered a set of manuscripts.



b. Choosing 'Tools -> Comparative tool' shows you a list with all public and private (your own) research sets that are/can be used for DCT analysis. You can see the details of these sets and you can go directly to the DCT that PASSIM made of them by default.

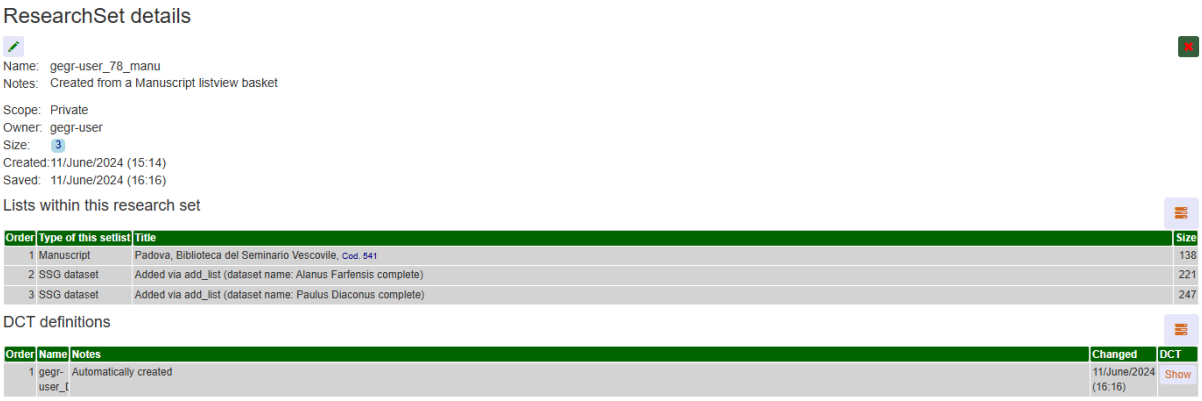
You can click the blue 'up arrow' in the DCT column to go directly to the detailed information page of a particular research set.

c. Choosing 'MyPASSIM -> Dynamic Comparative Table' gives you a list with all your DCT's. You can choose directly which of these you want to use for further analysis.



Clicking on the DCT name in DCT Tool page shows you a screen with the detailed information of the research set.

In all cases you will get to a screen with detailed Research Set information.



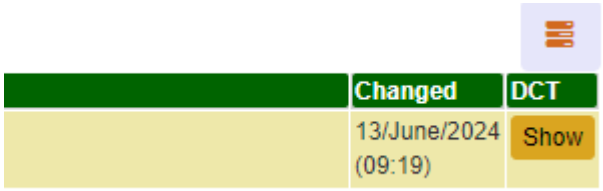
In the right upper corner of the details screen you can click the red 'x' button if you want to delete the research set.

In the upper left corner of the details screen you can click the ‘pencil’ button to change some of the details data.

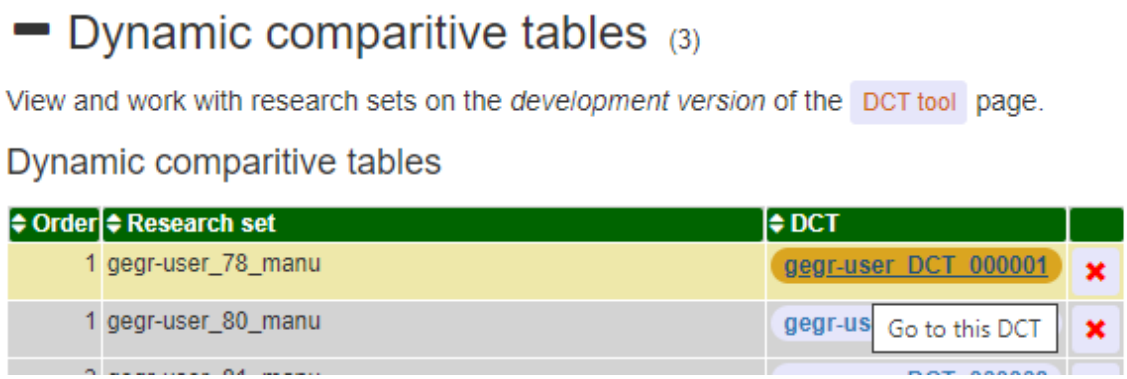
Furthermore, you see a list with all the items contained in the DCT research set. In this case one manuscript and two historical collections.

Below that list you see a list with all DCT definitions you have made with these items. In this case 1 (the default DCT PASSIM generates when you make and save a research set).

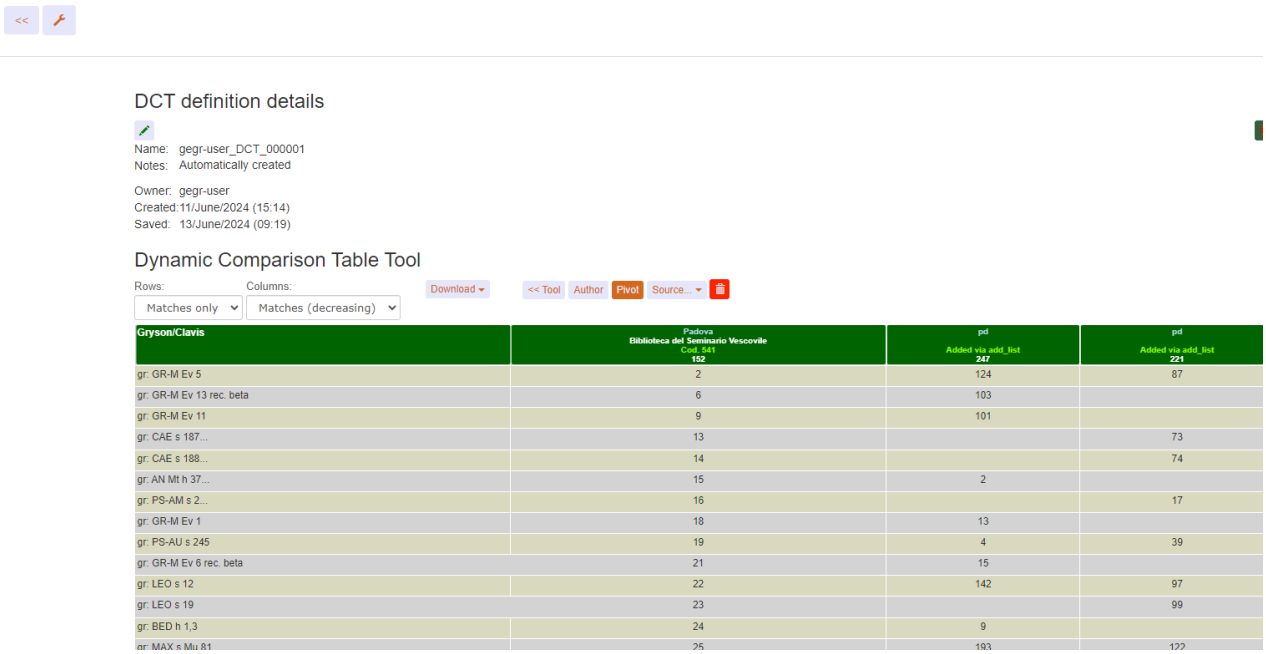
The analytic functionalities of the DCT tool can be found after clicking the ‘show’ button at the end of a row in the DCT definitions list.



You can also go to these functionalities directly by clicking a DCT in your list of Dynamic Comparative Tables in MyPASSIM.



In either case you go to a specific DCT. The following functionalities are at your disposal.

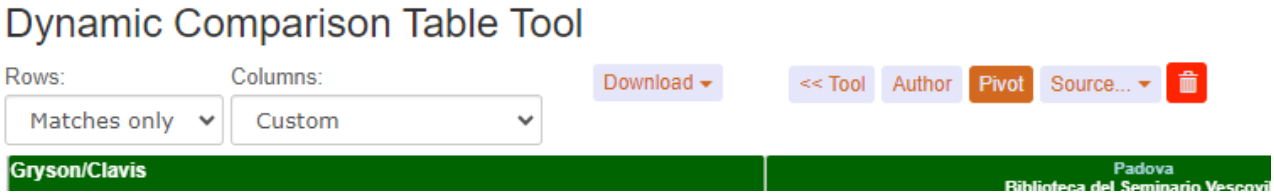


In the top left corner, you see two buttons.

Clicking the left one brings you (back) to the list of DCT definitions.

Clicking the right one shows you the research set details of this DCT.

Furthermore, you can change part of the definition details. And you can delete the DCT definition. The most important functionalities for analysis can be found just above the Dynamic Comparison Table.



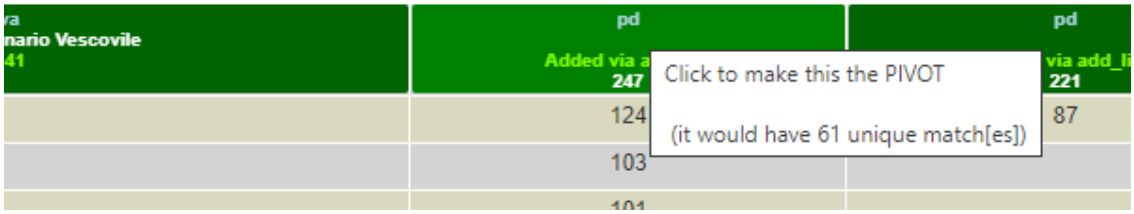
From left to right:

- Choose if you want to show matches only between the pivot (the anchor for the comparison, in this case, Cod. 541) and the other items (HC's of Paul the Deacon and Alanus of Farfa) OR if you want to show all the texts in the pivot.
- Choose a sorting order of the columns.
- Download the DCT as image (png) or data (json or Excel).
- Go back to the research set details screen.
- Toggle between showing or not showing the author of a text.
- If you changed the pivot: use the 'pivot' button to recalculate the pivot. See below.
- You can add items to the research set by clicking the 'Source' button.
- You can delete an item from the research set by dragging it to the waste basket. See below.

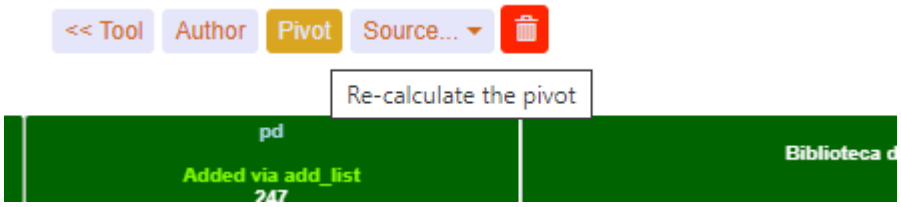
Changing the pivot

You can change the item in a research set that is used as pivot in the DCT. To do this follow these steps:

a. Hover over the column header of the item that you choose as new pivot. Contextual help will indicate if you are in the right place to change it. Click. You will see that your chosen item in now the pivot of the DCT.



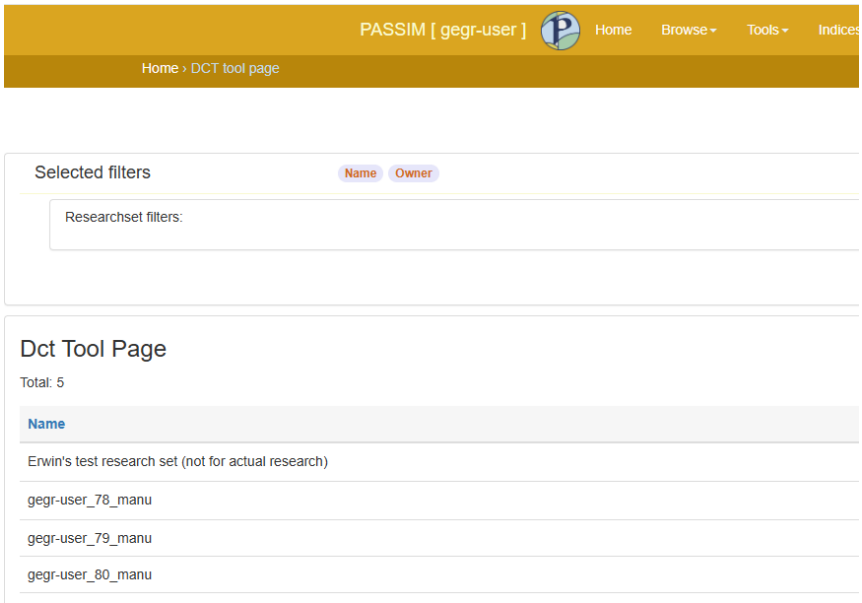
b. Click the 'pivot' button to let PASSIM recalculate the DCT.



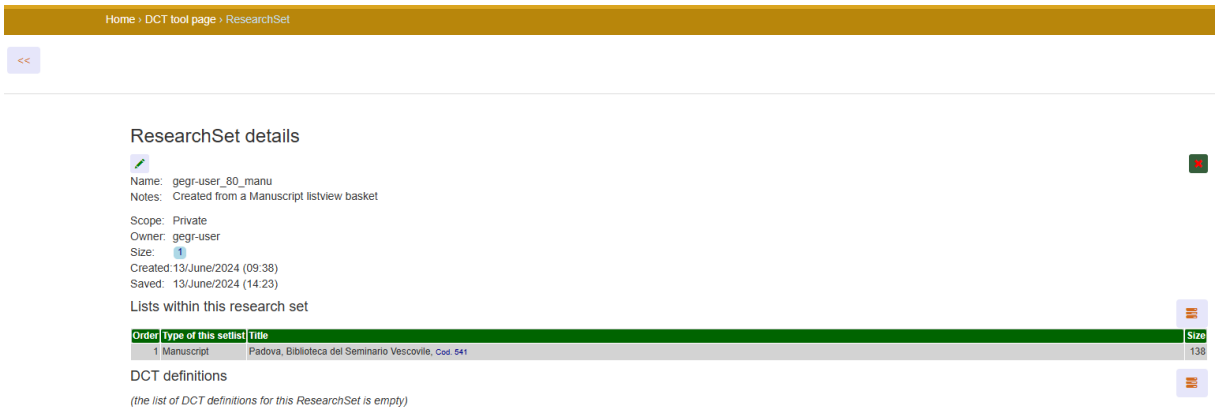
N.B / Note: Clicking on the same column header can also take you to the detail page for that Manuscript, so make sure that you are hovering on the correct spot to change the pivot.

Deleting a research set

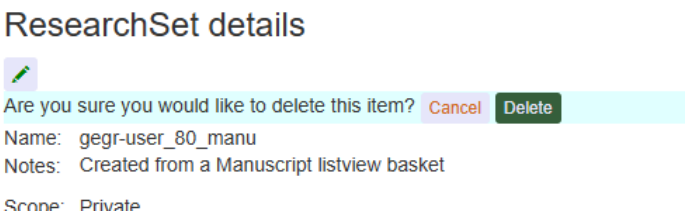
To delete a research set go to the Dynamic Comparative Table page of PASSIM.



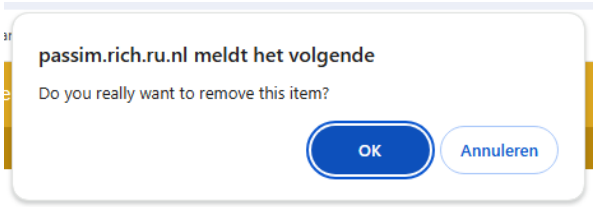
Choose the research set you want to delete by clicking on the name of it. In this example 'gegr-user_80_manu'. The details of the research set will be shown.



Click the red ‘x’ button in the upper right corner to delete the research set. You will be asked twice to confirm this delete.



Choose again ‘delete’.



Choose ‘OK’ if you are absolutely sure. The research set will be permanently removed.

Cluster Analysis

The Clustering Plugin (Tools > Plugin) is designed for the detection and visualization of manuscript groupings based on the selection and order of sermons within them.

Its core functionalities are:

1. Quantify Similarity/Dissimilarity: The plugin measures how similar or different manuscripts are by considering both the selection of texts and their sequential order.
2. Retrieve Similar Manuscripts: For any given manuscript ("anchor"), the plugin identifies the most similar manuscripts in terms of both content overlap and order.
3. Visualize Manuscript Relationships: Using dimension reduction and clustering techniques, the plugin visualizes the relative positions of manuscripts. Manuscripts with many shared sermons and similar sermon order will appear closer to each other than those with fewer shared sermons or different text arrangements.

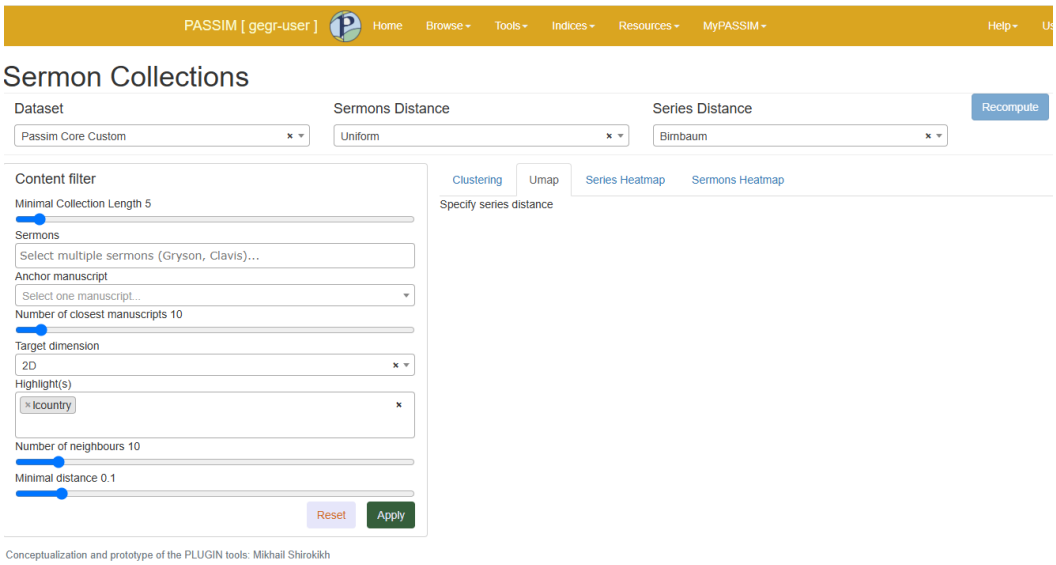
The Clustering Plugin might serve as a valuable starting point for research, particularly in the initial stages of identification of a case study. By visualizing the structure of the entire dataset, the plugin helps in discovering groups of manuscripts, the witnesses that may have been overlooked by scholars or those with unclear association to specific research questions.

Specifically, the plugin helps detect the reproduction of various transmission patterns, observe their place in the transmission, and assess their impact on transmission during any given period. This is possible owing to the possibility of hiding manuscripts by date.

Relationship to the DCT

The Clustering Plugin is intended to be used alongside and as a preliminary step for the Dynamic Comparative Table (DCT). For example, researchers can use the plugin to identify a regionally or chronologically coherent group of manuscripts, and then use DCT to analyze the differences in their content.

You can start the cluster analysis by choosing ‘Tools -> Plugin’.

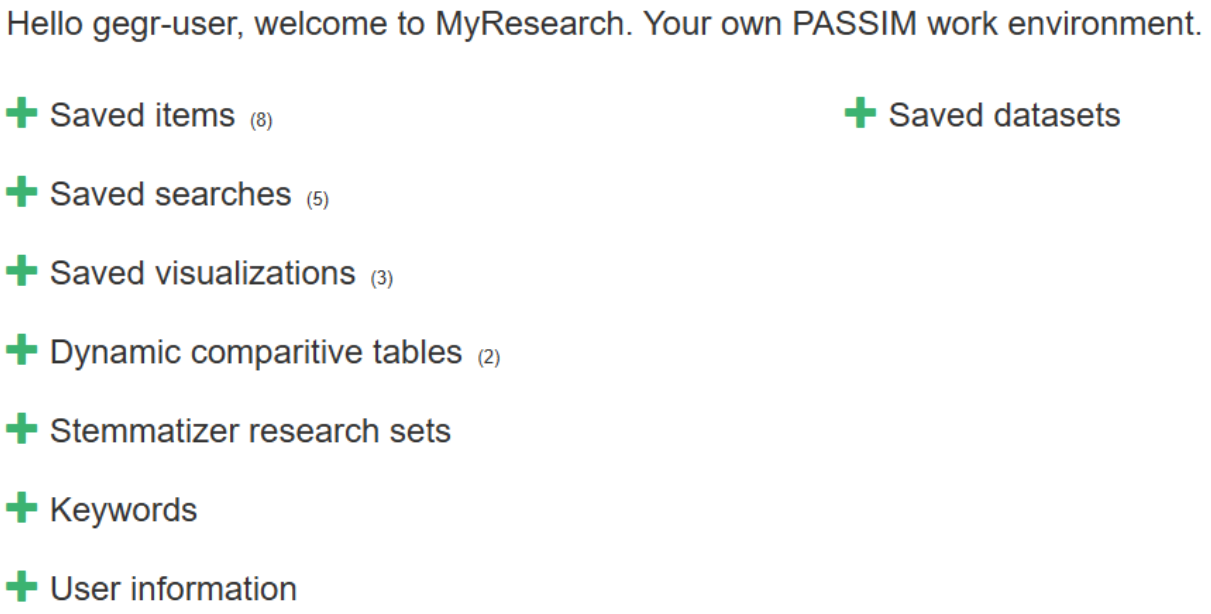


[A full user guide to the Clustering plugin will be made available shortly]

MyPASSIM

Introduction to managing personal research data

In MyPASSIM all your saved items, saved searches, visualizations, dynamic comparative tables, personal keywords and datasets can be found and managed. You can also manage your user profile information. Choose 'MyPASSIM' in the MyPASSIM dropdown menu at the top of the screen.



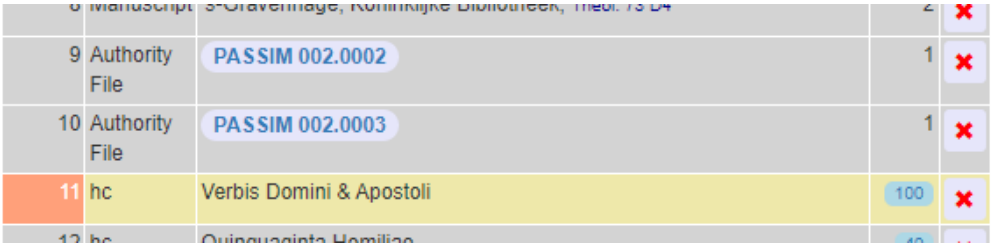
General functionality for the list views in MyPASSIM.

Every list view of MyPASSIM has the following functionalities.

1. You can change the order of the list by clicking on the little 'up' and 'down' arrows in the column headers.

2. You can change the order by dragging a row to another place in the list of items.

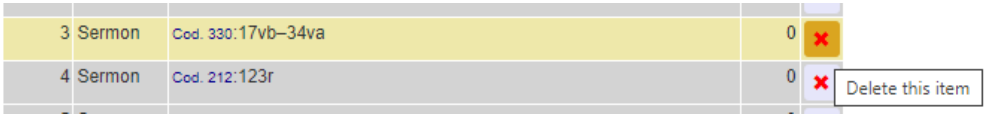
1. Click the 'order' number field



2. Drag the row to the desired place in the list

8	Manuscript	's-Gravenhage, Koninklijke Bibliotheek, Theol. 73 D4	2
11	hc	Verbis Domini & Apostoli	100
9	Authority File	PASSIM 002.0002	1
10	Authority File	PASSIM 002.0003	1
12	hc	Quinquaginta Homiliae	49

3. Each one of the items can be removed from the list by clicking



Saved items

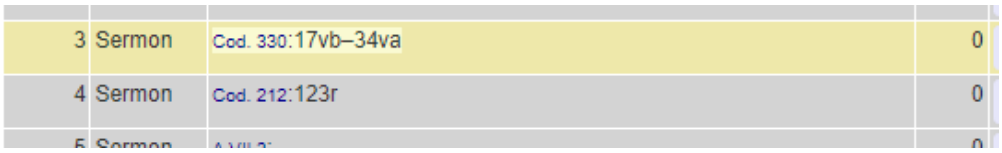
Clicking the 'Saved items' button will display a list of all items you saved.

Saved items 0

Order	Item	Title	Size
1	Sermon	Latin 2017:-	1
2	Sermon	Cod. Sang. 433:685-706	1
3	Sermon	Cod. 330:17vb–34va	0
4	Sermon	Cod. 212:123r	0
5	Sermon	A VII 3:-	0
6	Sermon	350:124r-130r	1
7	Manuscript	's-Gravenhage, Koninklijke Bibliotheek, 10 B. 5	0
8	Manuscript	's-Gravenhage, Koninklijke Bibliotheek, Theol. 73 D4	2
9	Authority File	PASSIM 002.0002	1
10	Authority File	PASSIM 002.0003	1
11	hc	Verbis Domini & Apostoli	100
12	hc	Quinquaginta Homiliae	49

Clicking the 'Title' of a saved item shows the detailed information of that item. Example:

Clicking 'Cod. 330:17vb-34va' in the list

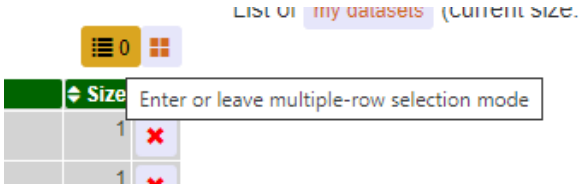


Shows the detailed information of that sermon (partly shown below)

Manifestation details

Status:	⊙⊙⊙
Saved item:	★
Locus:	17vb–34va
Attributed author:	Alcuinus
Section title:	-
Lectio:	-
Title:	De Orthographia.
Incipit:	(17vb) >me legat antiquas qui vult pro idest iustus
Explicit:	ad nomen dirivatum unguentum non un
Postscriptum:	-
Transcription:	-
Alt page numbering:	-
Notes alt page numbering:	-
Feast:	-
Bible reference(s):	-
Cod. notes:	-
Note:	Bemerkung : f. 18r–29v werden verschi
Keywords:	-

You can select specific rows from your list of saved items by clicking the 'row selection' button:



A column with check boxes is added to the list. In case you select manuscripts and/or historical collections you can add these to a research set to be used in the DCT Tool.

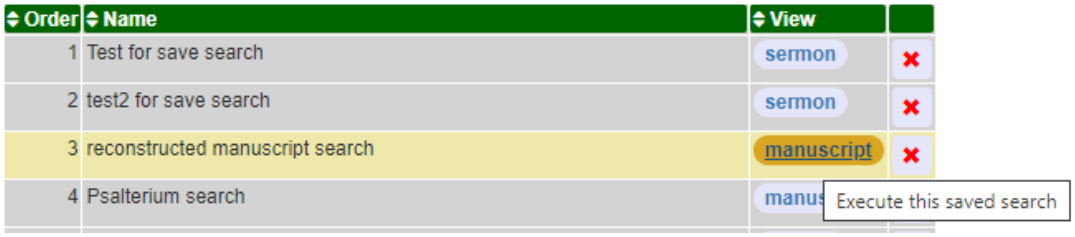
Clicking the 'Add to DCT' button shows a list of your research sets. Select one of them.

Saved searches

A list of saved searches is provided when clicking ‘Saved searches’.

See ‘**General functionality**’ in the introduction above.

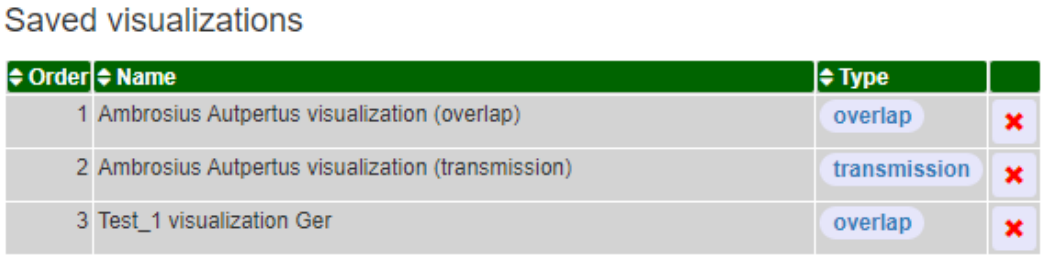
Execute one of the searches by clicking the appropriate button in the ‘View’ column.



The results of the search will be shown.

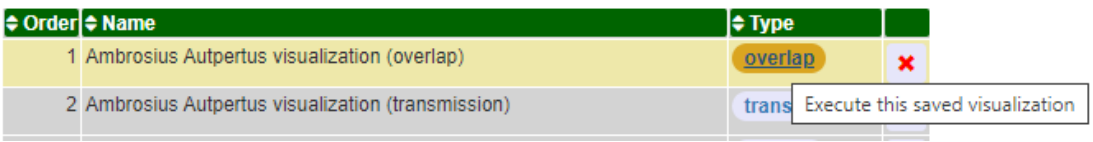
Saved visualizations

All your saved visualizations are available by clicking the header ‘Saved visualizations’.



See ‘**General functionality**’ in the introduction above.

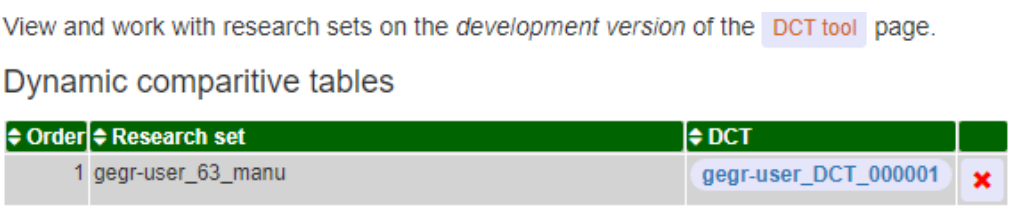
Execute one of the visualizations by clicking the appropriate button in the ‘Type’ column.



The resulting visualization will be shown.

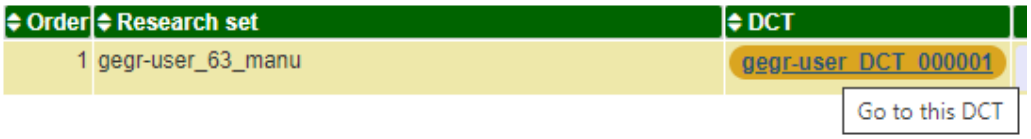
Dynamic Comparative Tables

Here you find a list of all your saved DCT's.



See '**General functionality**' in the introduction above.

Go to a specific DCT by clicking the appropriate button in the 'DCT' column.



Stemmatizer research sets

Description will follow.

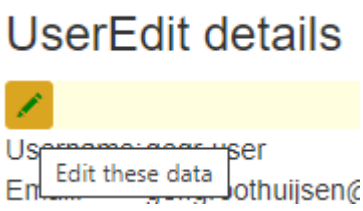
Keywords

If you have added personal keywords you will find a list of them here.

User profile data

You can alter your personal data by clicking 'Profile' in MyPASSIM. Click the 'pencil' button adjacent to your user data

On the next screen, click the 'pencil' button again to actually change the data.



The following data can be changed:

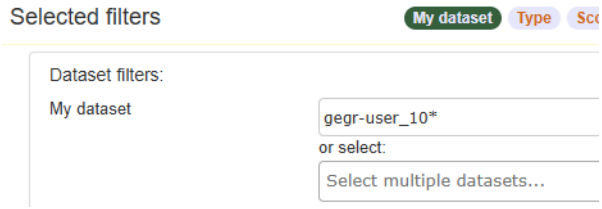
3. E-mail address
4. First name
5. Last name

Saved datasets

All the datasets containing manifestations, manuscripts or authority files you have made using the 'Basket' functionality can be found in MyPASSIM.

Clicking the 'my datasets' button shows you the list of all your datasets in PASSIM.

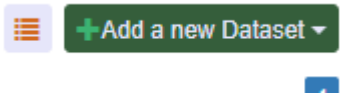
You can filter this list using (a combination of) type (Authority File, Manuscript, Manifestation), scope (private, public, team), owner or using part of the name + wildcards for a selection of datasets.



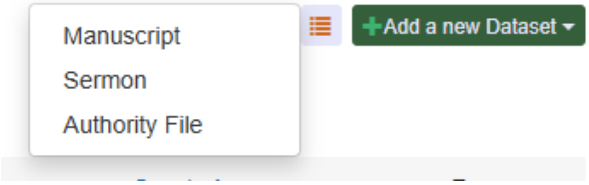
The above search will generate the following output list (partly shown below).

In the upper right corner of this list, you will see the button to start the shortcut process for adding a new dataset to your list of datasets. Normally you create a new dataset after filtering manifestations, manuscripts or AF's using the Basket functionality. But you can do it also from the list of datasets in MyPASSIM.

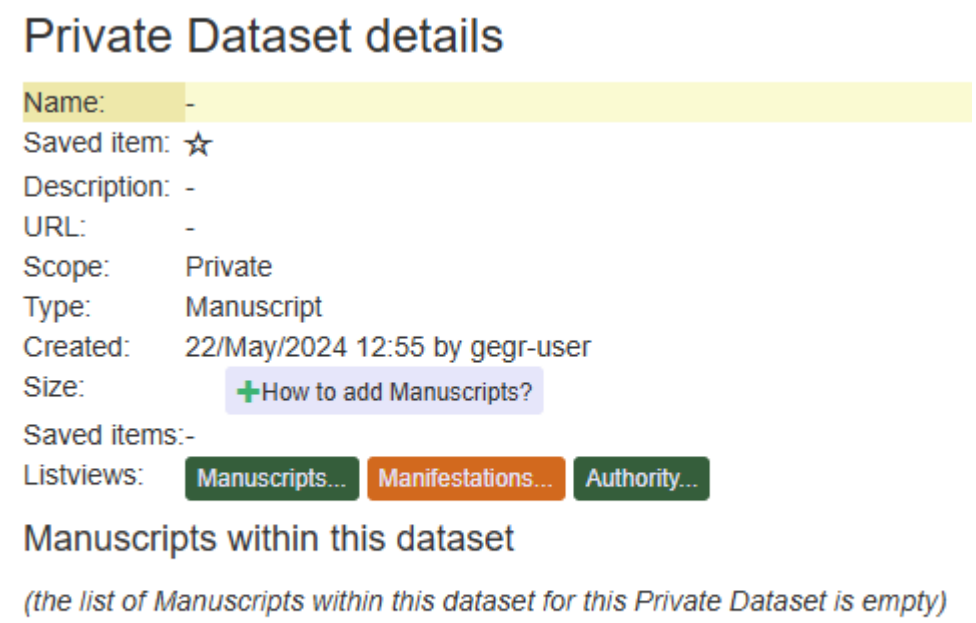
1. Click the 'Add a new Dataset' button in the top right corner of your dataset list.



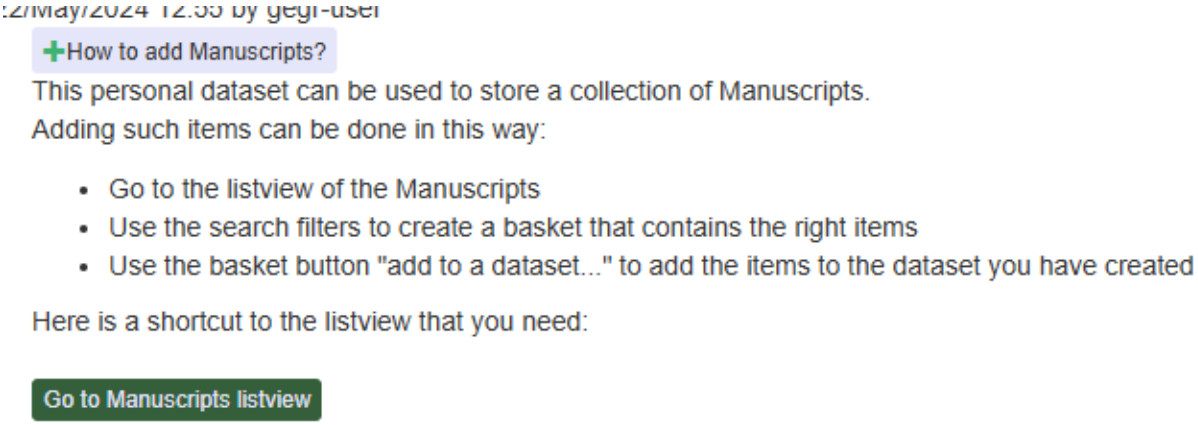
2. Choose what kind of dataset you want to create.



3. If you choose 'Manuscript' you will see the following detailed information of the (as yet empty) dataset you are going to create.



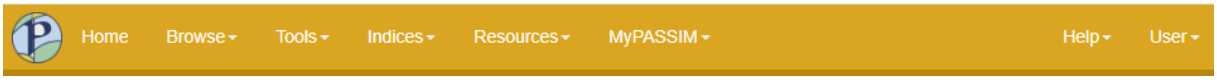
The next steps you have to take are shown when you click the 'How to add Manuscripts' button.

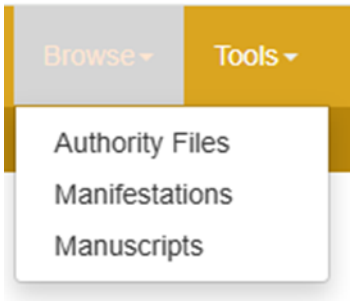
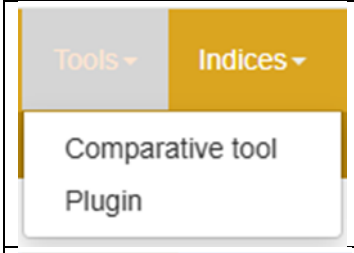
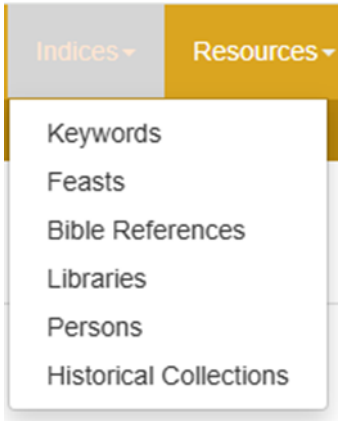
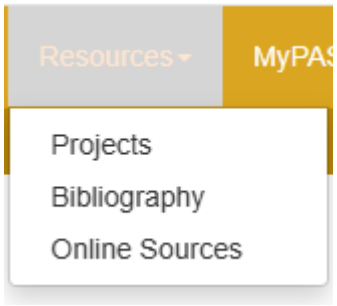


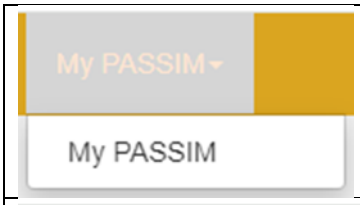
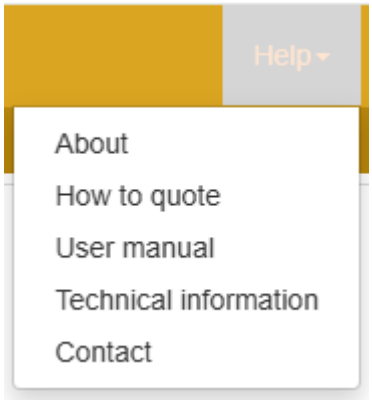
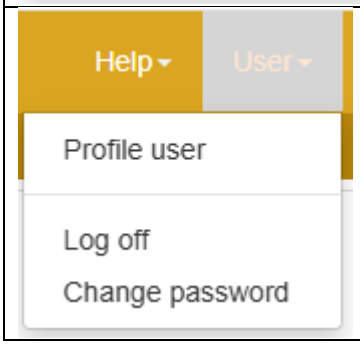
4. Click 'Go to Manuscript list view' and make your selection of manuscripts. Before adding them to the basket don't forget to clear the basket first!
5. Select 'Add to dataset' and choose the empty dataset name PASSIM prepared for you.

Short description of the top level PASSIM menu's

The top bar of the PASSIM screen contains 6 dropdown menu's that give you access to the different functions of the web application. Below is a short description of these menu's.



	From this menu you can browse and filter all the items in the PASSIM database. From there you can: • Get more detailed information on Authority Files, Manifestations and Manuscripts. • Perform simple and complex queries on the database content. • Save search results (items, sets of items) in the Basket. • Make output to use in a Network Analysis. • Make research sets for DCT analysis **N.B./** The Basket function is only available for saving search results for manifestations, manuscripts and Authority Files.
	This menu gives direct access to: • The Comparative tool (DCT). • The Plugin (Cluster analysis).
	Here you find (searchable) lists of indices used in PASSIM: • Keywords as set by the editors • Feasts used • Bible references • Names of libraries • Names of persons • Historical collections **N.B./** From the 'Persons' list you can quickly go to the gold sermons, sermon manifestation descriptions and Authority File descriptions linked to a person.
	You can access information on: • The projects that added data to the PASSIM database • Editions, Literature and Online resources • Online sources in the field of sermon studies

	This menu gives access to the personal research environment of the user. The functionality is described in the chapter 'MyPASSIM'.
	Here you find: • General information about the PASSIM project and the PASSIM web application • Directions on how to quote PASSIM • This user manual • Some technical information • Contact information
	This menu can be used to • Read and edit user information • Log off • Quickly change your PASSIM password

Hardware/software requirements

The Passim application is first and foremost intended for laptops and computers with a minimum screen size of 1280 pixels.

It is possible to work with Passim from a tablet or smart phone, but there are a couple of things that may not function correctly:

Hovering: Hovering over badges and buttons may not provide the information pop-ups that are seen, when working with Passim from a full-sized screen. Hovering on a tablet or smartphone could be done, however, by holding the budge or button longer.

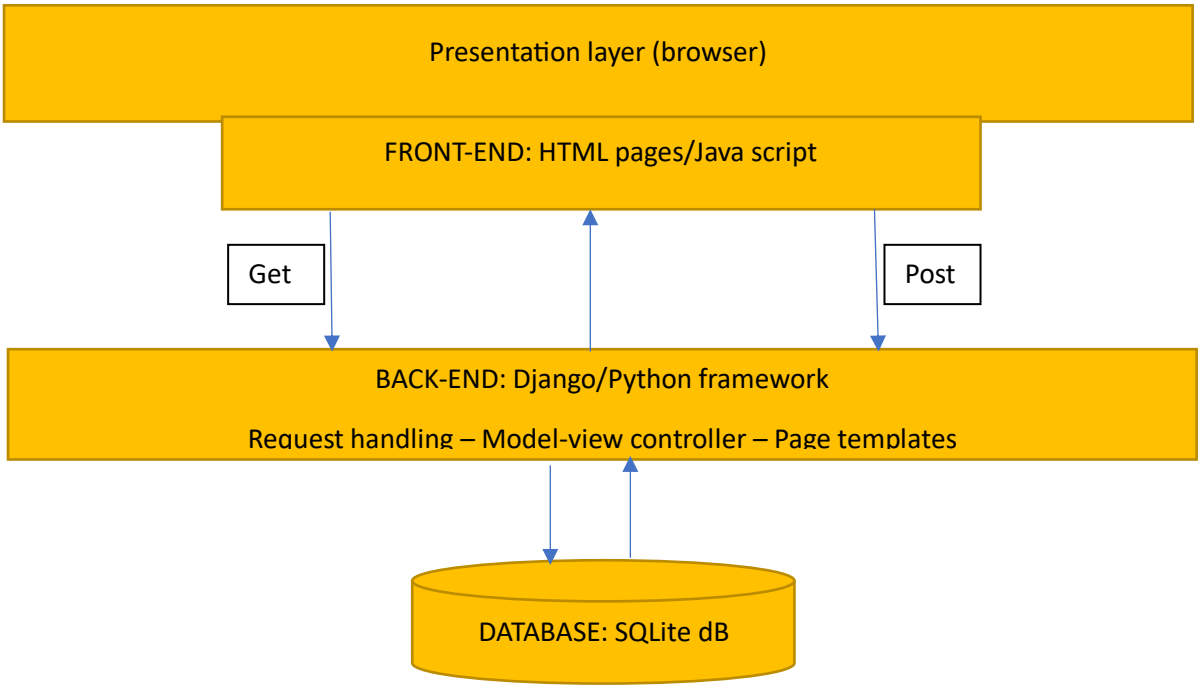
Menu bar: The menu bar reduces to a 'hamburger' choice button on most smaller devices, but this doesn't always work. The result is that much of the screen will be taken up by information the user is not interested in.

Cluttering: Text and graphics may clutter and overlap on certain screen sizes. This sometimes results in particular functions not being accessible.

There are no plans right now to make Passim work better on smart phones.

Overview of technology used

The PASSIM Research Tool is a web application which uses a web browser as its presentation layer. All interaction between user and the web application/database (button clicks, searches et cetera) takes place through screens (HTML pages/Java script) that are presented to the user in the web browser. See below for a graphical representation of the technical parts of the tool.



The PASSIM Research Tool is a Django web application. Django is a high-level framework built on the Python programming language. The web application consists of the following parts:

- **Front-end:** The 'HTML' pages that are 'served' to the user interface
- **Back-end:** The Django/Python program running on a Radboud University server
- **Database:** The place where the data on manuscripts, sermons and other information chunks are stored

Front-end

The front-end is the system that the user interacts with through his or her web browser. It consists of the HTML pages the user looks at. And it also consists of the Javascript processing. Whenever the user loads a HTML page, Javascript code is loaded too. Pressing buttons often results in the execution of a piece of Javascript code -- something that takes place entirely on the user's browser. Some pieces of Javascript send POST or GET requests to the back-end server, resulting in dynamically updated web pages.

Back-end

The back-end of the PASSIM web application uses the Django-Python framework. The back-end application is a process running on a server park of the Radboud University. The communication between front-end and the Django-Python framework is done through the *uwsgi protocol* (https://en.wikipedia.org/wiki/UWSGI) .

The framework uses a 'model-view-controller' system: the model reflects the structure of the database, the controller determines what is shown to the user and the view consists of the HTML files that are served.

The back-end is the place where most of the work takes place for the PASSIM web application. While users are served HTML files, the buttons they press trigger requests to be sent to the server. The Python functions that run there handle the requests and, if needed prepare other HTML pages that are then sent to the user's browser.

The preparation of HTML pages in the Django framework makes use of a template system. The templates contain the rough sketch of the HTML pages, and the data-dependent context provides the information to fill in the details.

If you are interested in details of the models used in the PASSIM application you can look at the models.py file of the Github place where the code is kept.

Database

The Passim application uses a SQLite database. This kind of database is contained in one file. The database file resides somewhere on the same server as the web application. Regular back-ups of this file assure little loss of data, should a calamity occur.

If you are interested in details of the database structure you can also look at the models.py file at Github. Each class mentioned in that file is based on models. Each model represents one table in the database.

Data handling

Most of the data handling is done on the server. The browser is only used for interaction between user and the Django/Python framework/database.