1. Academic search engines

- Choose a topic and and write your search strategy. Search in Google Scholar and Semantic Scholar and compare the results

In order to reproduce the search

- Google Scholar: query
- Semantic Scholar: query

RESEARCH TOPIC: The calculus of Constructions (λC): formalization of mathematics that allows machine verification.	**Google Scholar** **http://scholar.google.com**	**Semantic Scholar** **https://www.semanticscholar.org/**
Search strategy used (with keywords)	Full-text search including the whole phrase "calculus of construction".	Full-text search of keywords "calculus of construction" limited to computer science and journal articles.
Total number of results	3.780 results	150.000 results.

- Complete the table using ONLY the first 10 results found in GS and SS

	Google Scholar http://scholar.google.com	**Semantic Scholar** https://www.semanticscholar.org/
Are there duplicated records in your results?	No in the first 10.	Not in the first 10.
Can you create alerts to receive updates of your topic in your email?	Yes.	Yes.
Can you access to the full text of the documents retrieved?	Most of them but some require payment/subscription/authentication (ACM, IEEE, etc).	Most of them but some require payment/subscription/authentication (ACM, IEEE, etc).
From 1 to 5 (where 5 is the best mark), which is the relevance of all the results retrieved (in overall)? Why do you think so?	5/5. All of them are related to calculus of constructions and most of them are very relevant in the field of type theory.	4/5. Not as relevant as the ones from Google Scholar. Although ordering by citations gives similar results.
Can you sort your results by different criteria (for instance publication date, author...)?	Yes, but more limited than in Semantic Scholar.	Yes, by relevance, citation count, recency ...

Mention the different types of documents you have retrieved (articles from journals, proceedings, book chapters, theses...)	Only journal articles.	Only journal articles but you can easy filter by document type such as conference paper, review, case study, etc.
Is there an advanced search function?	Yes, I used it to reduce from 2M searches to 3k.	Not that I am aware of. Semantic Scholar is powered by statistics algorithms which try to give you more relevant results.
Can you export results to a bibliographic manager or send them by e-mail?	Yes, first you need to store them (press star) and then go to “My library” and use the export option.	Although you can save them as in Google Schoolar, you can export the whole library. But, you still can export them one by one.

2. INSPEC

Bibliotècnica (http://bibliotecnica.upc.edu/) > Bases de dades > Inspec (*Engineering Village*)
Before install the button eBIB in your navigator.

- Choose a topic of your interest.
- Write the most appropriate search strategy to find information on your topic. Then, submit your search in INSPEC database.
- Use the thesaurus if you need it to find keywords. Analize all retrieved results, whether they are suitable or not to your search query. Modify your search always you need it to find relevant information, with no noise neither silence.
- If you don't find information about your topic in INSPEC database, just change your topic and search again in INSPEC.

Topic of your research: Continuing with the same topic of type theory "Calculus of Constructions", let's focus on the particular theorem prover and proof assistant Coq which uses Inductive ƛC as the formal framework.
Please copy here your search string: link to the search

Description of your search strategy:

- Have you used keywords from the thesaurus? Which ones? Why/Whynot?

I used the keyword *type theory* to limit the results from Coq since this tool is also used for software verification.

- Have you used Boolean operators, truncation symbols or brackets in your search strategy?

I used boolean operators (AND) to include the keyword Coq and I used brackets for the keyword *Calculus of Constructions.*

- Have you used any option to limit your search results? For instance by language, dates, type of document… Explain and justify why you have used them.

Yes, I have limited the search by

- Database: only selecting INSPEC
- By date: since 1980 because the system λC and Coq are from this decade.
- Language: english
- Discipline: computer science

I did not filter by “Document Type” because some relevant information can be found in books apart from dissertations and journal articles.

Results evaluation:

- Are all retrieved results suitable and relevant? Why?

They are relevant to our goal λC + Coq such as “Practical Proof Search for Coq by Type Inhabitation” which uses Coq to implemental formal systems and techniques from the field of type theory.

- How have you refined or modified your search query to improve retrieved results?

The keyword “Type Theory” helped me removing non relevant uses of Coq for software verification.

3. Web of Science

- Access to Web of Science
- https://www.recursoscientificos.fecyt.es/
- Select WoS
- If necessary, select from the menu *I*nstitutional access (Sibboleth) "**Federation of Spain FECYT**"
- Authenticate using eBib button
- **Select Core Collection**

1. **Perform the following basic search at WoS in the topic field : neural models applied to speech automatic translation. Consider different ways to name each concepts. Once you have the results, answer the following questions:**

    a. How many results are retrieved?

    13 results in total (query).

    b. Who are the five authors with more works published?

    A. Batliner, H. Niemann, E. Noth, N. Goto, and T. Hori.

    c. Which is the organization with more works published?

    Chinese Academy of Science.

    d. How many documents are authored by UPC researchers?

    None in my search. The search doesn't allow you to filter by Institution.

    e. Which is the first country in the article publication ranking?

    USA followed by China.

    f. Which is the source (journal, conference) which published more articles?

Interspeech.

g. Which is the most cited article?

   Advances in Arabic Speech Transcription at IBM Under the DARPA GALE Program

h. How many citations is receiving this article up to now?

   23 citations in total.

2. **Look for documents by author Panayiotis Georgiou in WoS. For each question, please explain how have you done your search**

I used the following query. At first, I tried to search for "Panayiotis Georgiou" as author but 0 results were given. You need to be a bit clever and look for "Georgiou, Panayiotis G.".

a. How many of his works have been indexed in WoS – Core Collection?

   67 publications in total.

b. Where does he currently work?

   USC (University of Southern California).

c. Which is his most-cited document? How many citations?

   "Alpha-Stable Modeling of Noise and Robust Time-Delay Estimation in the Presence of Impulsive Noise"
   which has been cited 131 times.

e. Which are his more frequent co-authors?

   S. Narayanan and B.Xiao.