Literature Management

Targets, Tools, & Tips

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Databases (数据库)

China Knowledge Resource Integrated Database
www.cnki.net

Thomson Reuters, Web of Science (SCI collection)
apps.webofknowledge.com

ELSEVIER, ScienceDirect (SCI except those of ASME)
www.sciencedirect.com

ASME Digital Collection (Journals & Conference Proceedings)
asmedigitalcollection.asme.org

Google Scholar (literature aggregation 文献聚合)
scholar.google.com

Springer, Taylor & Francis, Wiley Online Library, NASA Scientific and Technical Information Program

Notes:

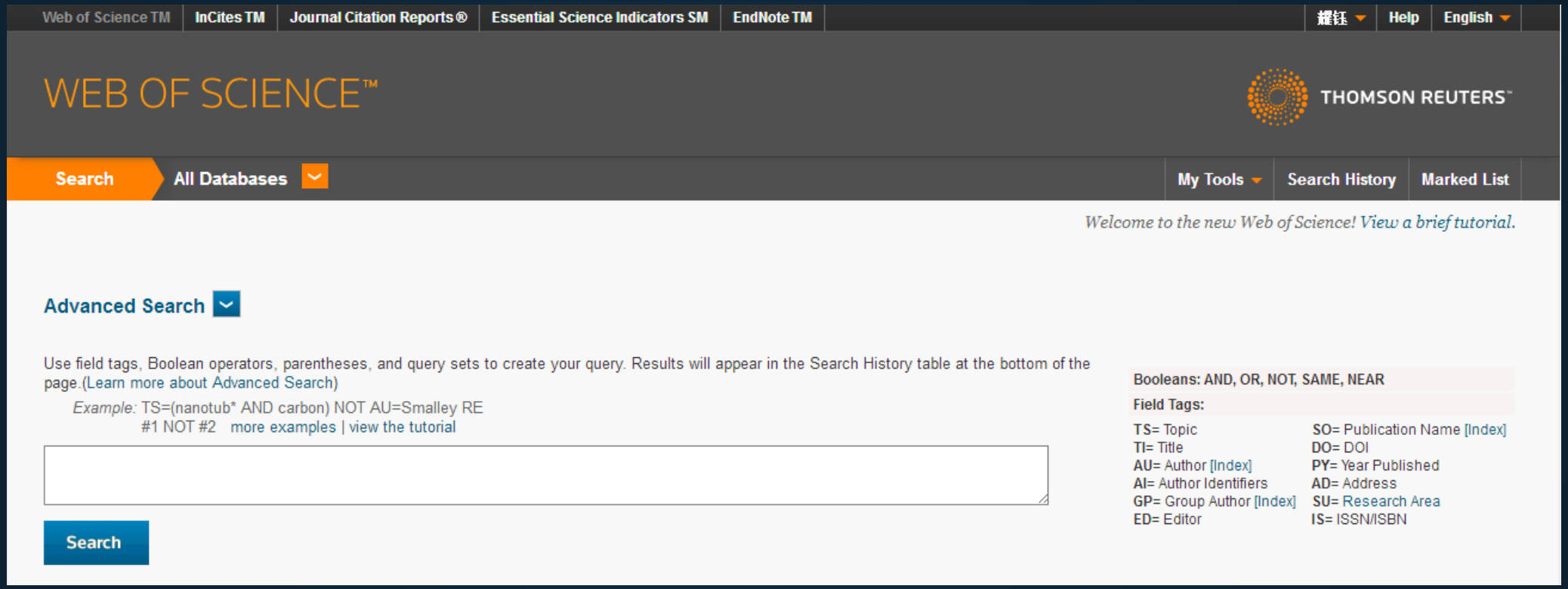
- Some databases may require the client to use academic IP addresses.
- Sometimes you have to find a way to bypass the GFW.

Databases (数据库)

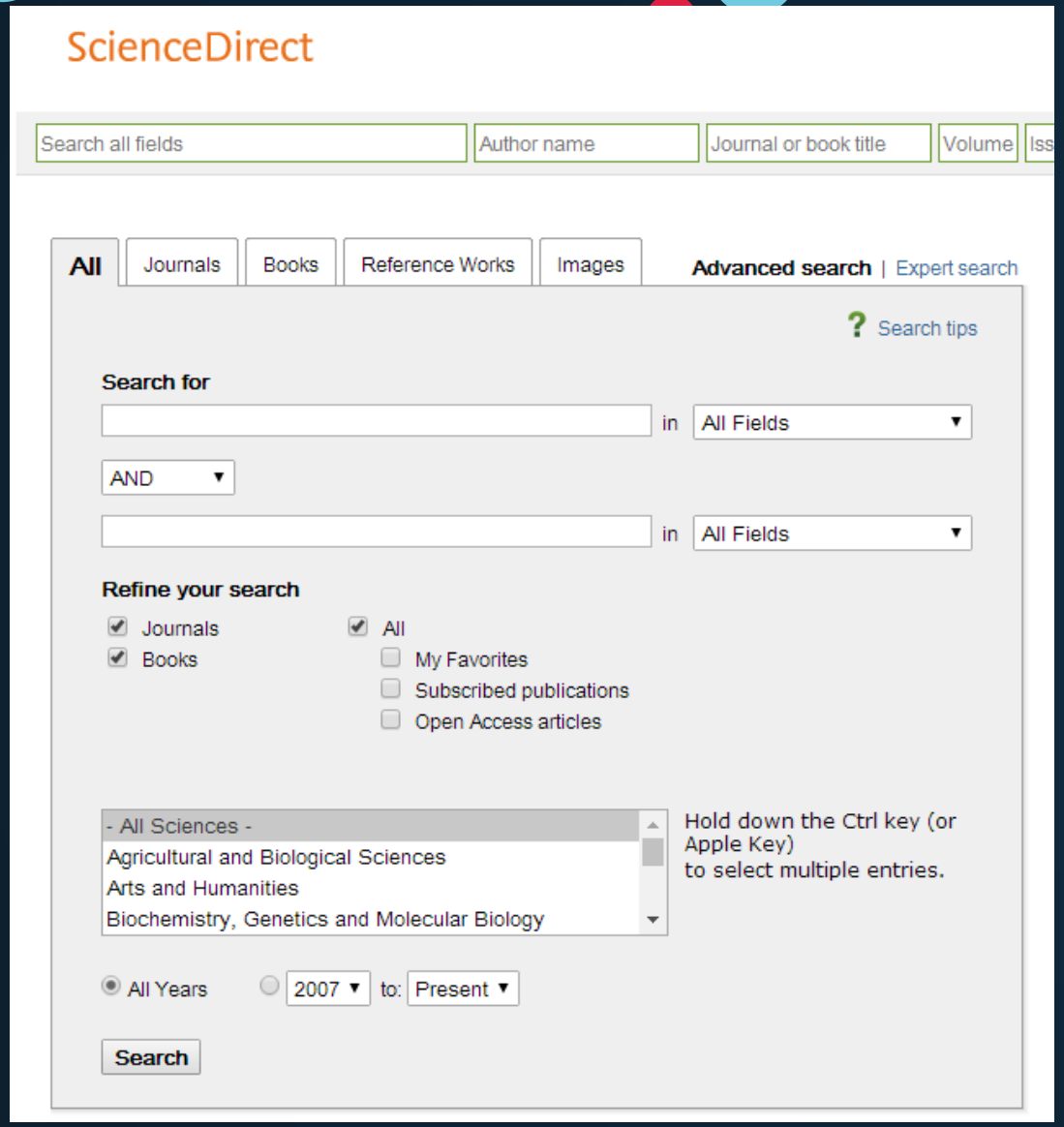
Tips:

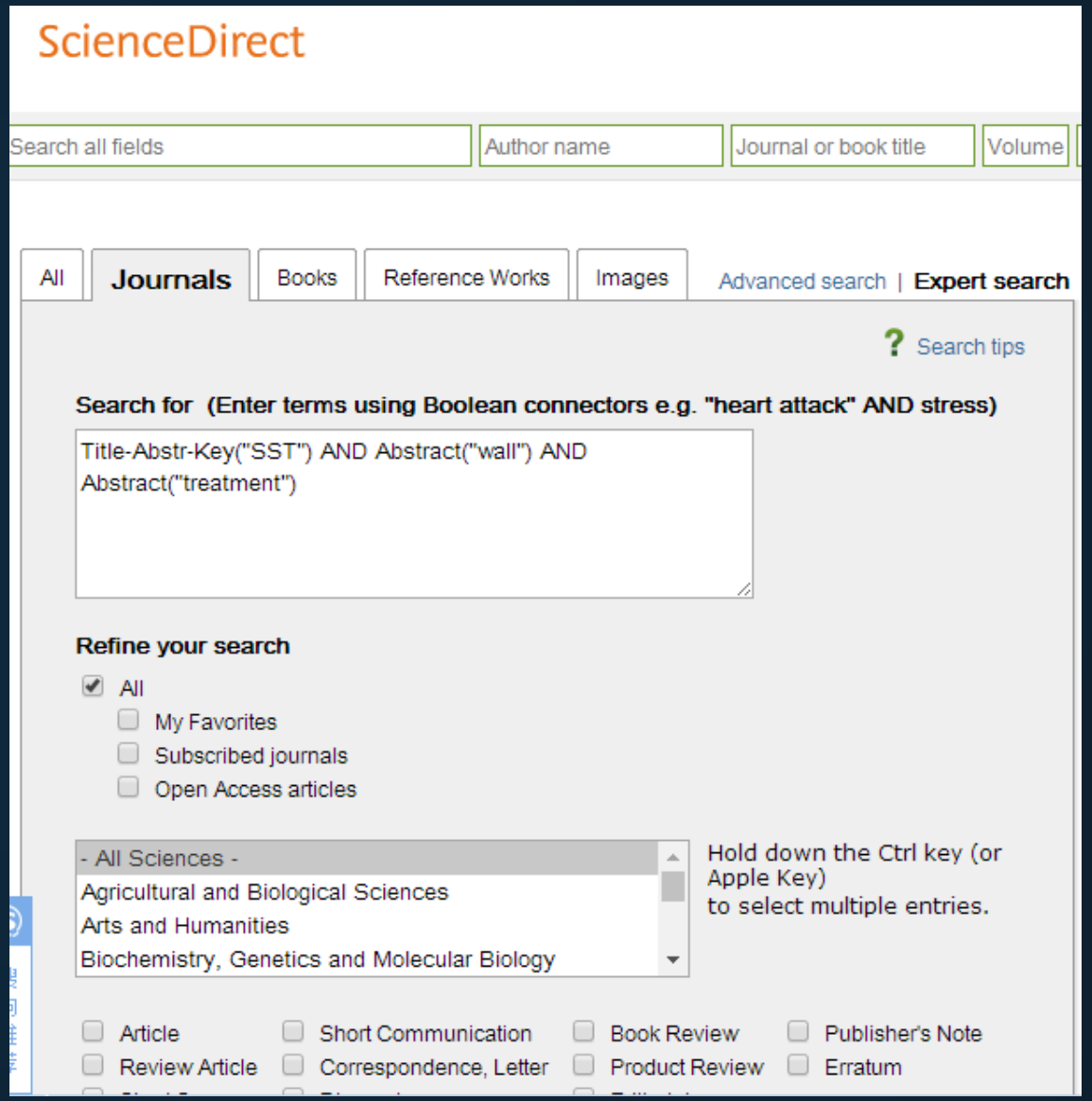
- Create user accounts for databases (创建用户)
  - Save your search history
  - Reminder service
- Use advanced/expert search (使用高级/专家搜索)
  - Quickly narrow down the number of search results
  - Search with complex logic
- Focus on literature with higher number of “times cited”(尽量关注高引用率文献)

Databases (数据库)



Databases (数据库)





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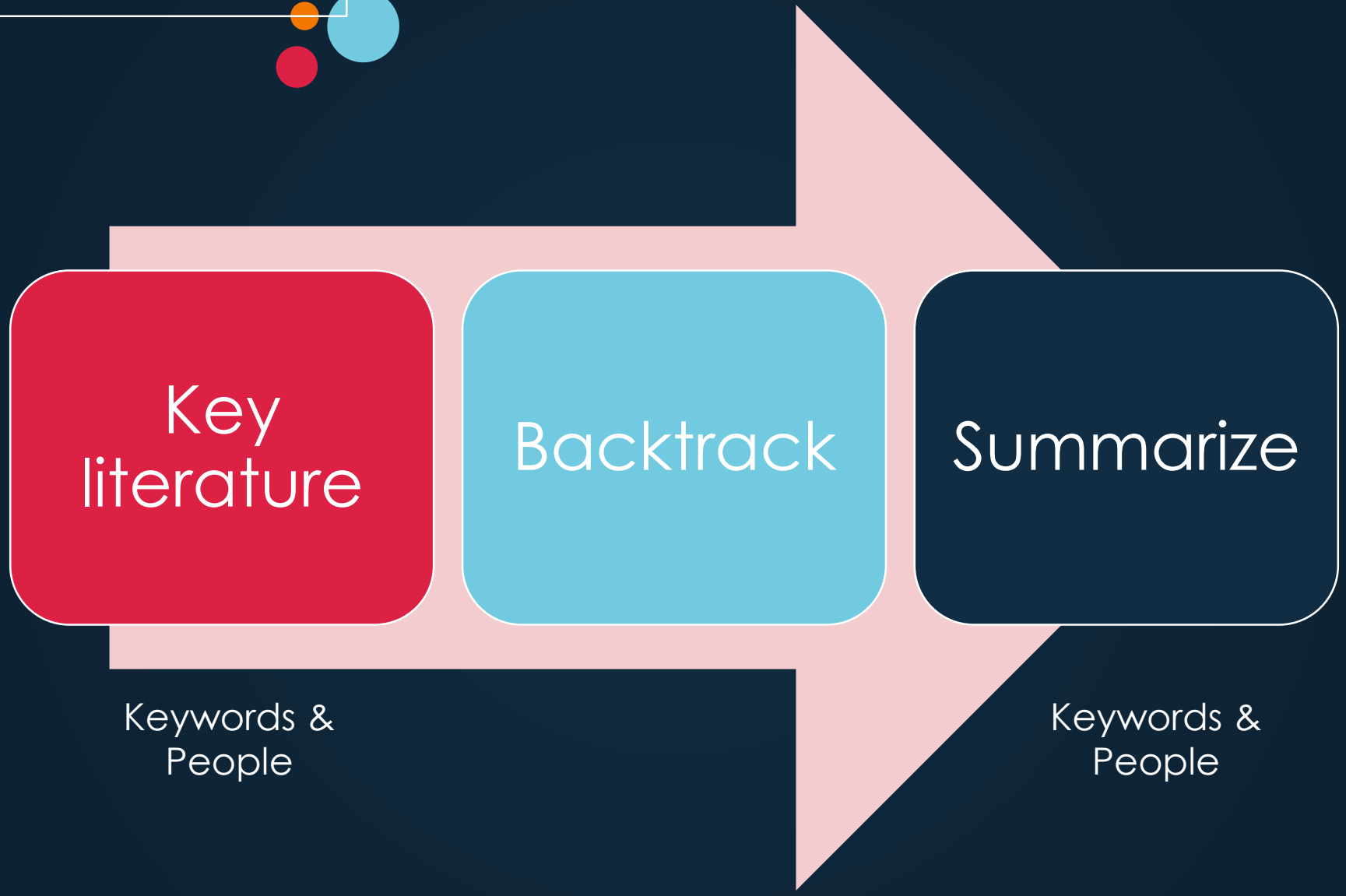
Backtracking (回溯)

Once you determined your research field or specific research subject, it's time to massively collect relating literature to quickly get a sense of:

- The basic definitions, concepts, fundamental theories (assumptions and limitations), general models, methods of prediction and common results.
- The research tools available, including general and specific purpose software, numerical methods and associated open-source codes, lower-level theoretical models or approximations, experiment methodologies and instrumentations, online databases.
- People. Who at what time proposed what kind of theory/approximation/simulation/experiment which has great significance.
- Organizations, institutions, laboratories, research groups, websites
- Relating domestic researchers. Relating people in YOUR INSTITUTION!

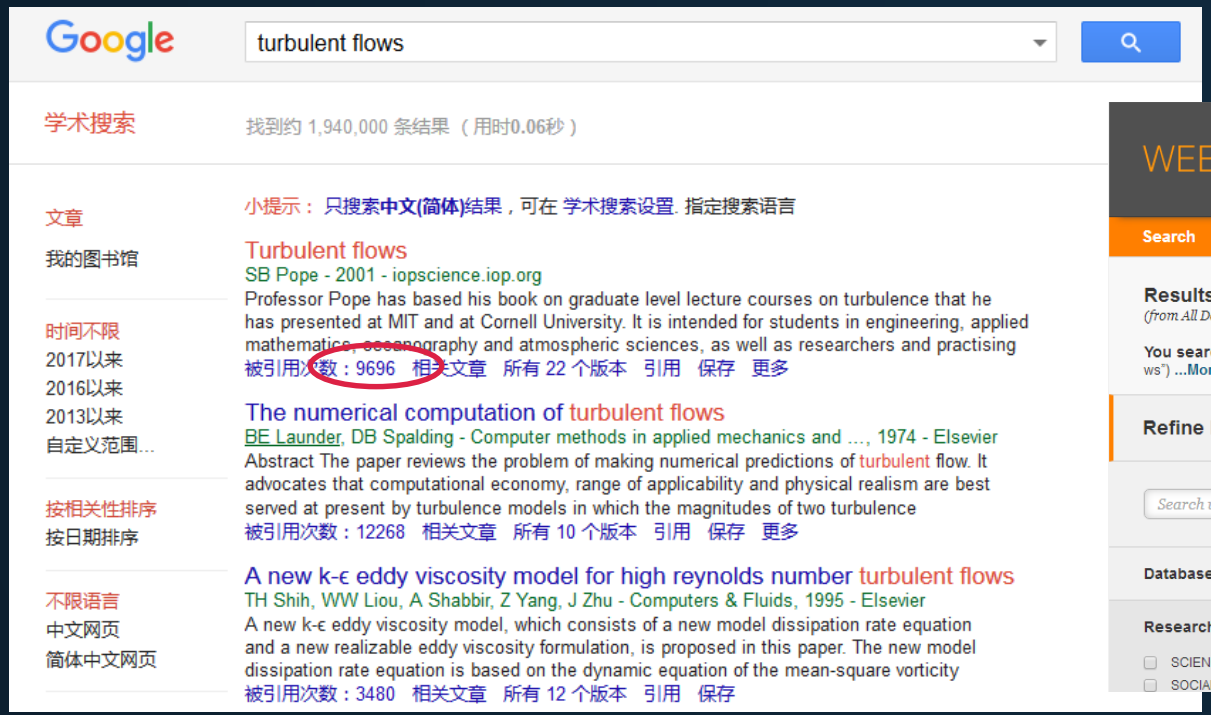
Backtracking (回溯)

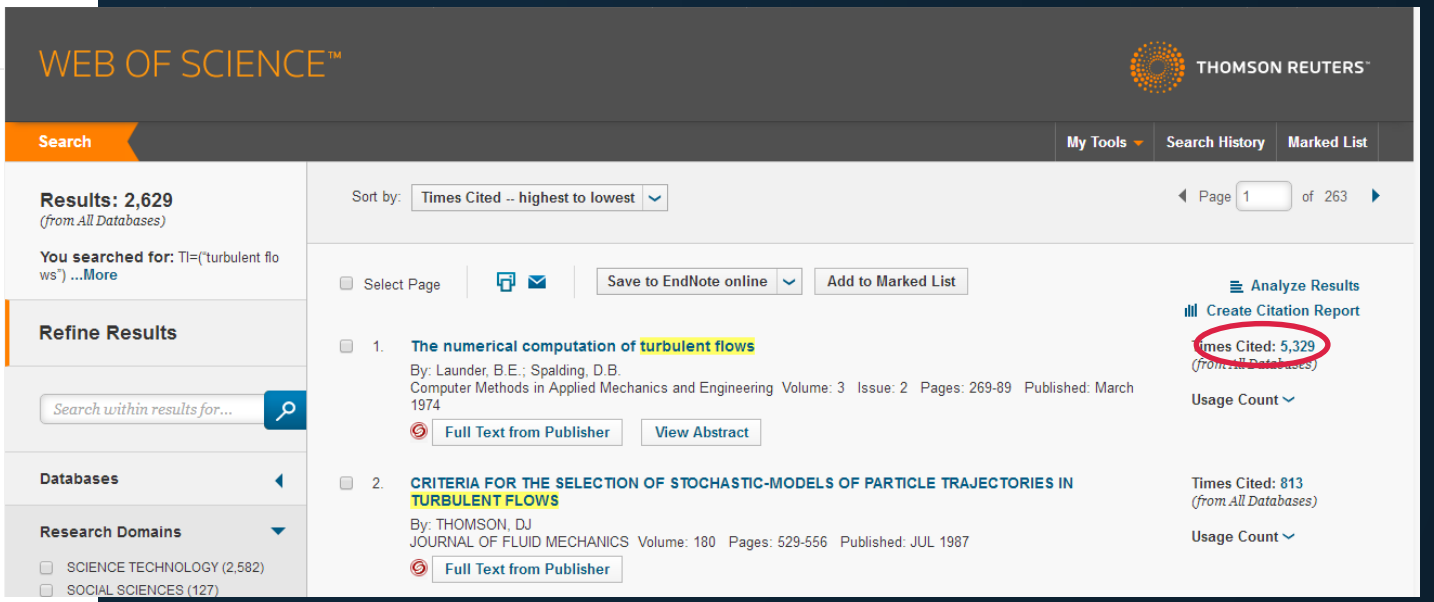


Backtracking (回溯)

How to find key literature?

- From the references of average-level articles.
- From the references of famous or average-level text books.
- Only the number of “citation times” matters.





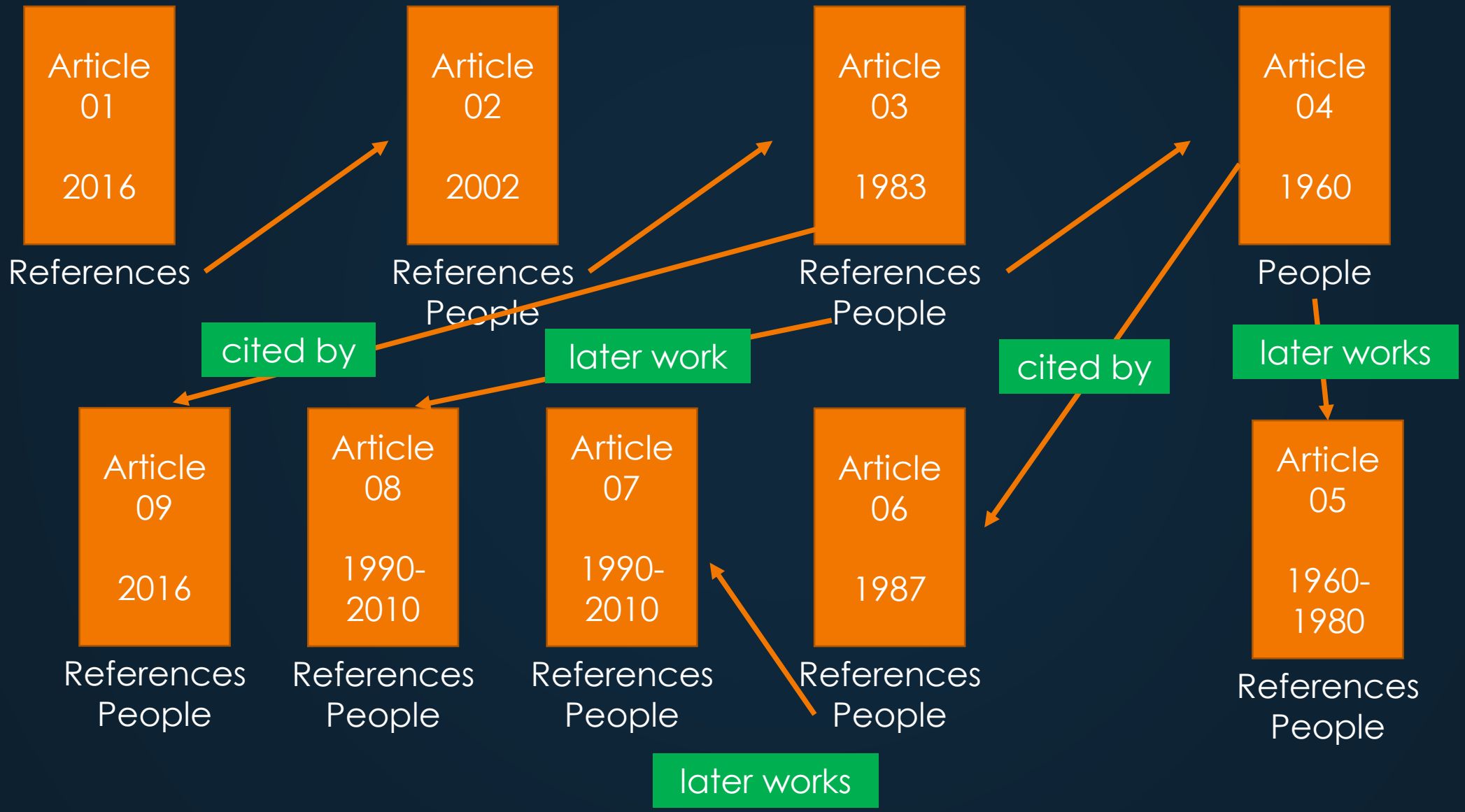
Backtracking (回溯)

After the previous step, we (hopefully) obtained:
Important keywords, names of people, basic theories.
We should be able to / are going to describe:

- How did the basic theories and approximation methods come into being? How did these theories evolve in time?
- How many numerical methods are there? What the time sequences of those methods? How many software we can use?
- What kind of experiments people have the ability to conduct at different time.
- As for numerical simulations and experiments, what kinds of physical/statistical properties are important? On what kinds of things/aspects that people would like or tends to investigate?
- What are the pros and cons of each theory, numerical method, software, experiment technique. What are the most suitable tasks of the above. What are their assumptions and limitations. What are the trends and frontiers (前沿).
- Who (people/organizations) are the most important, famous, productive?

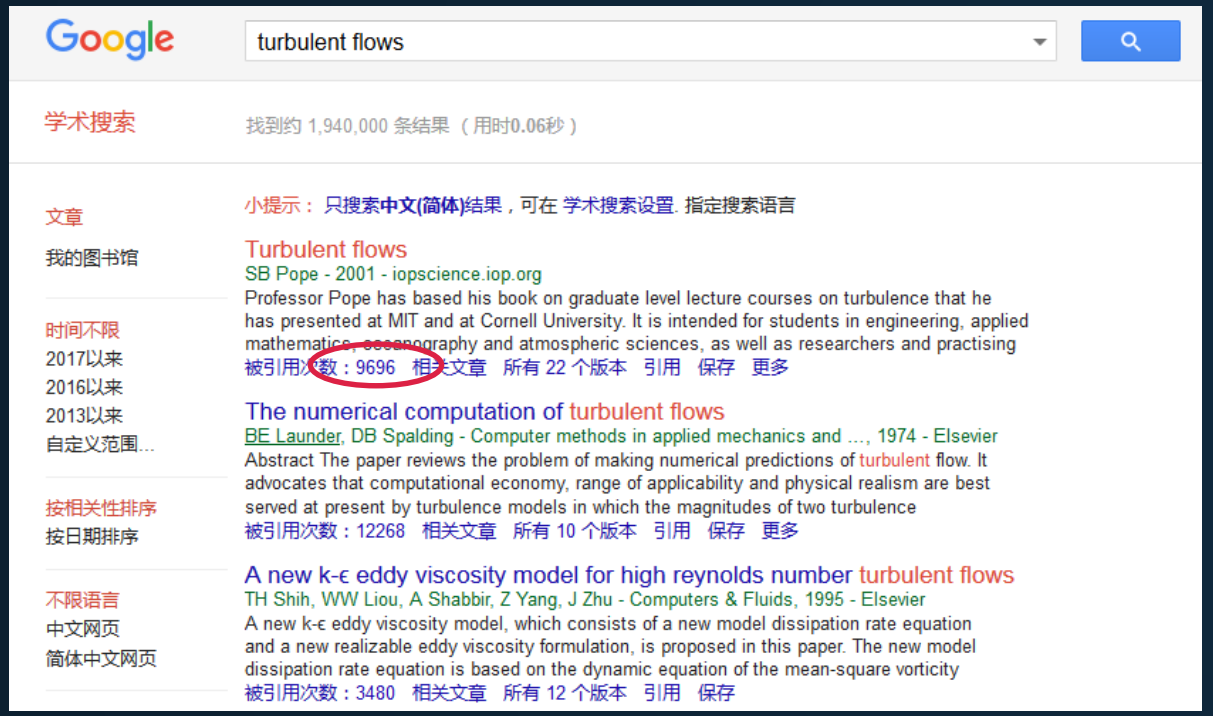
Backtracking (回溯)

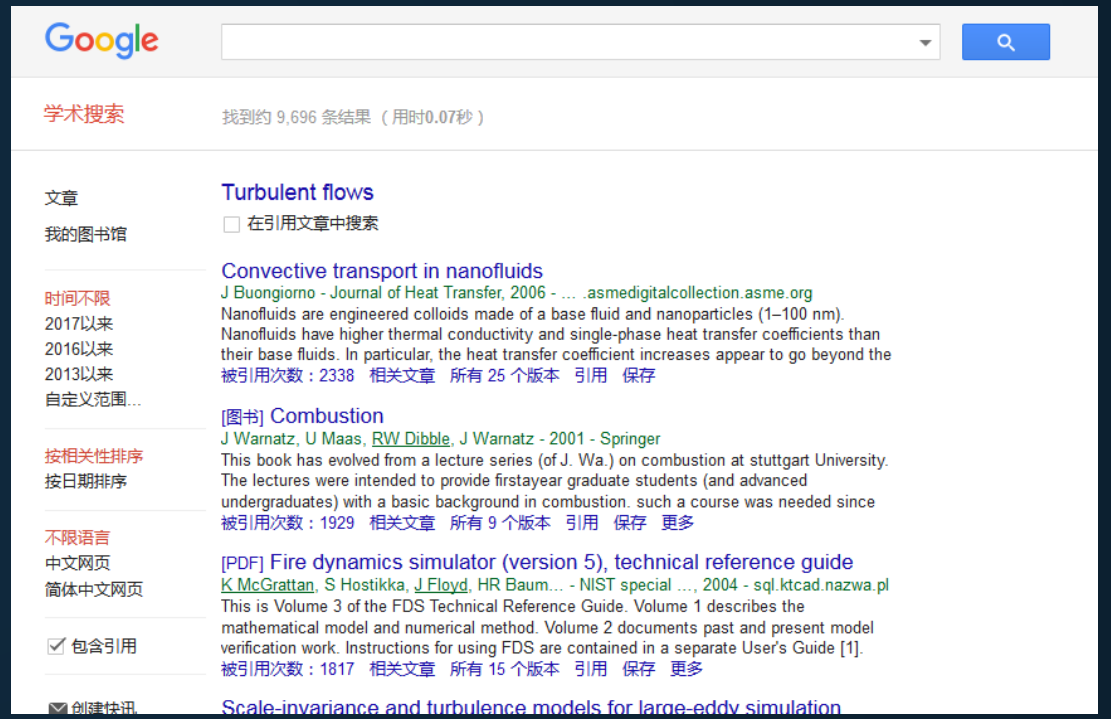
With relatively higher number of cited times!



Backtracking (回溯)

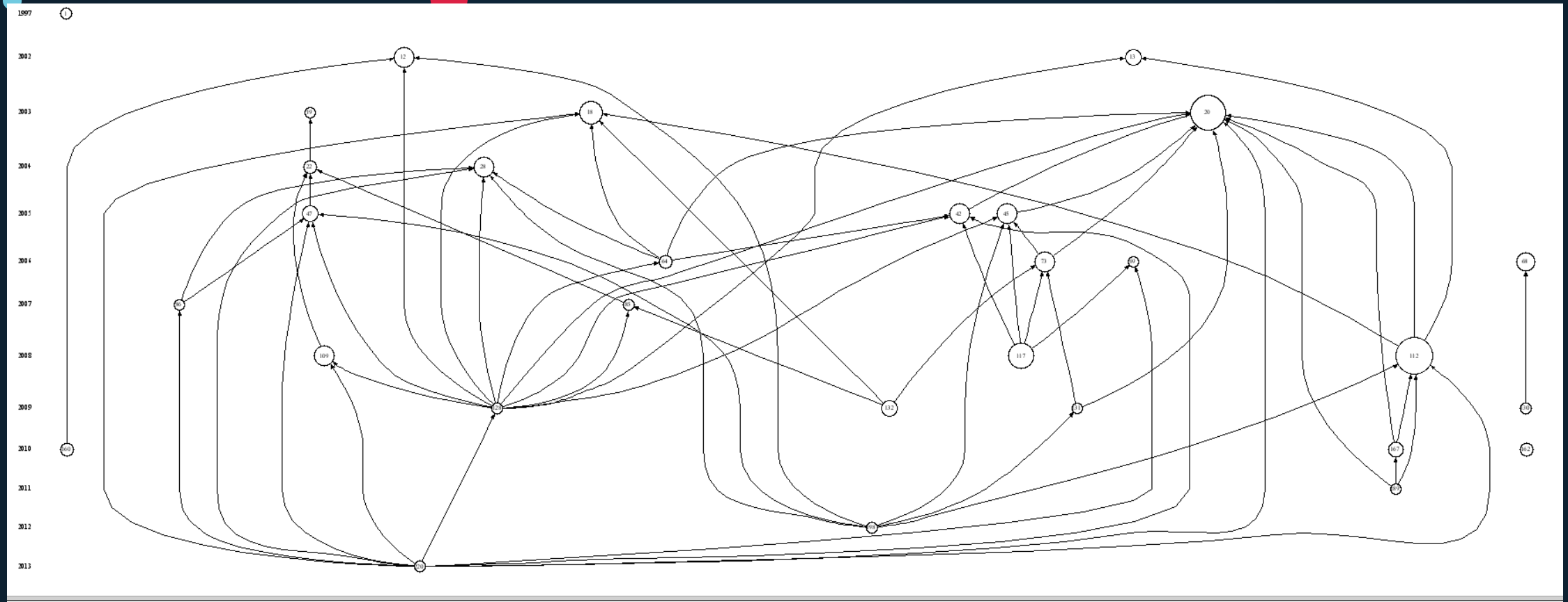
Google Scholar





Backtracking (回溯)

HistCite Pro

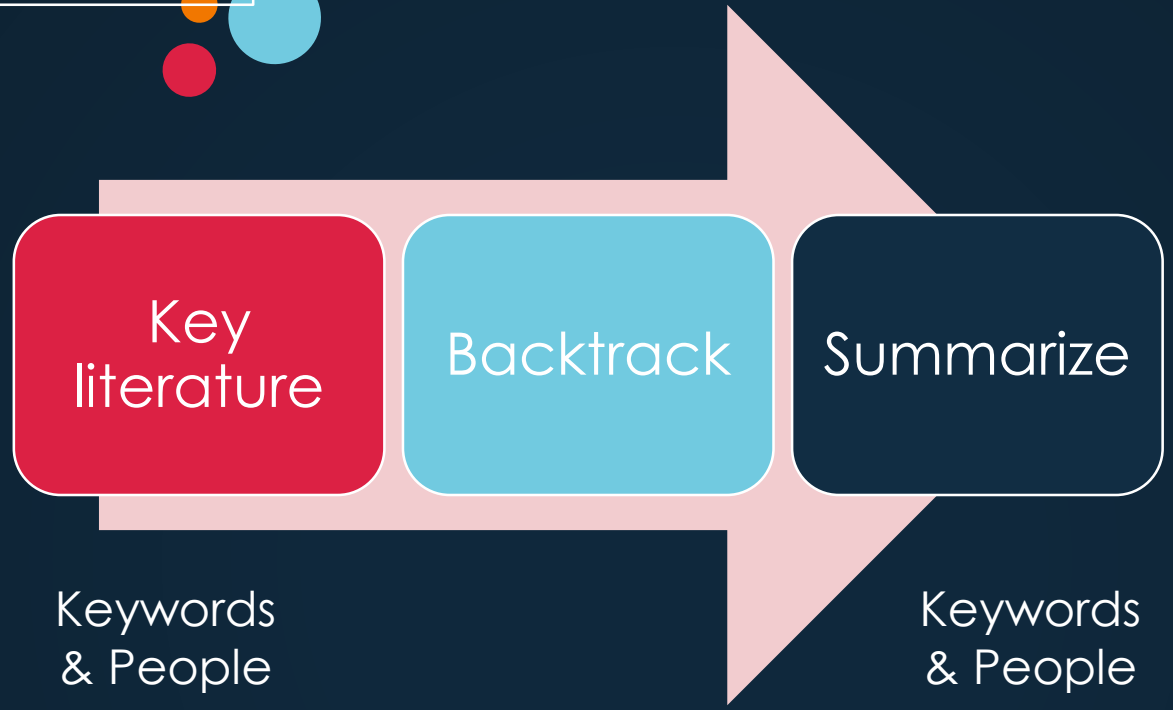


Nodes: 30, Links: 60
LCS, top 30; Min: 4, Max: 42 (LCS scaled)

		LCS	GCS
1.	1 Rodi W, 1997, J WIND ENG IND AEROD, V71, P55	5	114
2.	12 Labourasse E, 2002, J COMPUT PHYS, V182, P301	14	42
3.	13 Quemere P, 2002, INT J NUMER METH FL, V40, P903	8	28
4.	18 Hamba F, 2003, THEOR COMP FLUID DYN, V16, P387	17	51
5.	19 Benhamadouche S, 2003, INT J HEAT FLUID FL, V24, P470	4	73
6.	20 Davidson L, 2003, INT J NUMER METH FL, V43, P1003	40	93
7.	22 Hanjalic K, 2004, ERCOFTAC SER, V9, P451	6	13
8.	28 Germano M, 2004, THEOR COMP FLUID DYN, V17, P225	13	27

Backtracking (回溯)

Summarize the backtracking



Keywords & People

Help your to do the backtracking.

Keywords & People

Build up keywords and properties that are particularly important to your own research.

Not the general keywords!

建立起对自己将要进行的研究有意义的关键词和关键信息体系，这些关键词不同于文献中那些通用的关键词

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Collecting literature

Personal philosophy and methodologies.

I need a system which provides:

- Store literature on computers.
- Add specific self-defined tag/keyword to every single literature.
- Add specific self-defined numerical attribute (属性) to every single literature.
- Add specific self-defined descriptive attribute to every single literature.
- Classification and sorting with respect to the above tags/keywords, numerical and descriptive attributes.

It is actually a personal database!

From a software engineering point of view.

An example of personal database.

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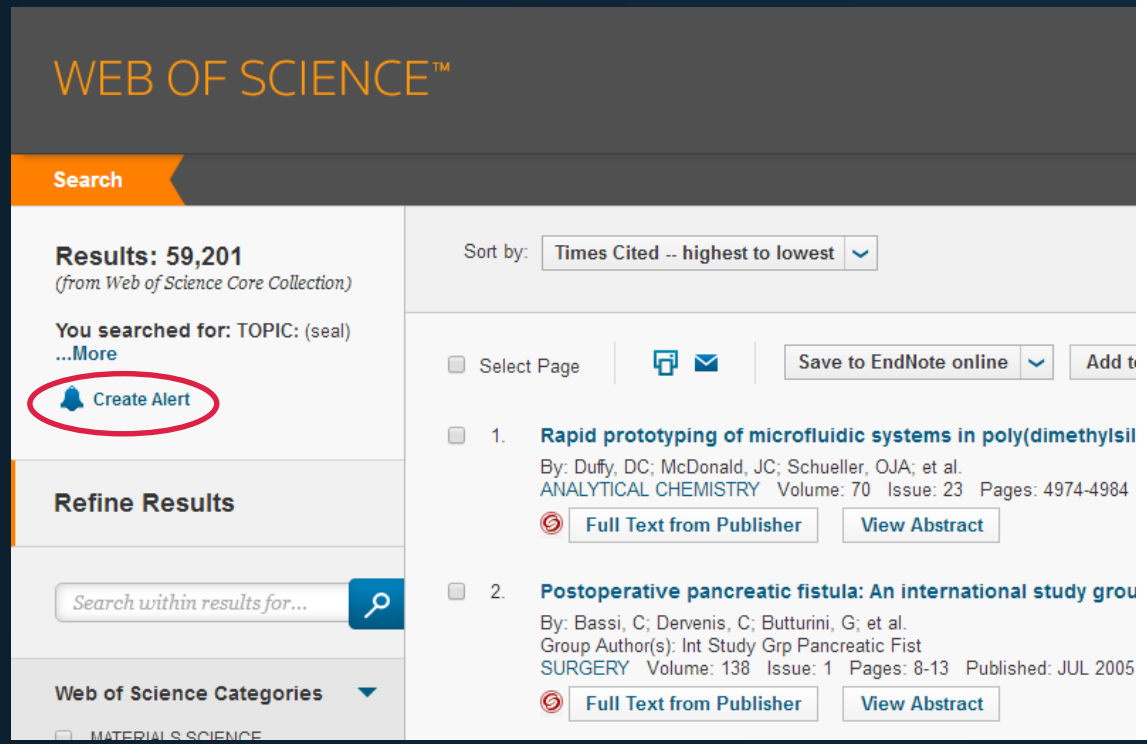
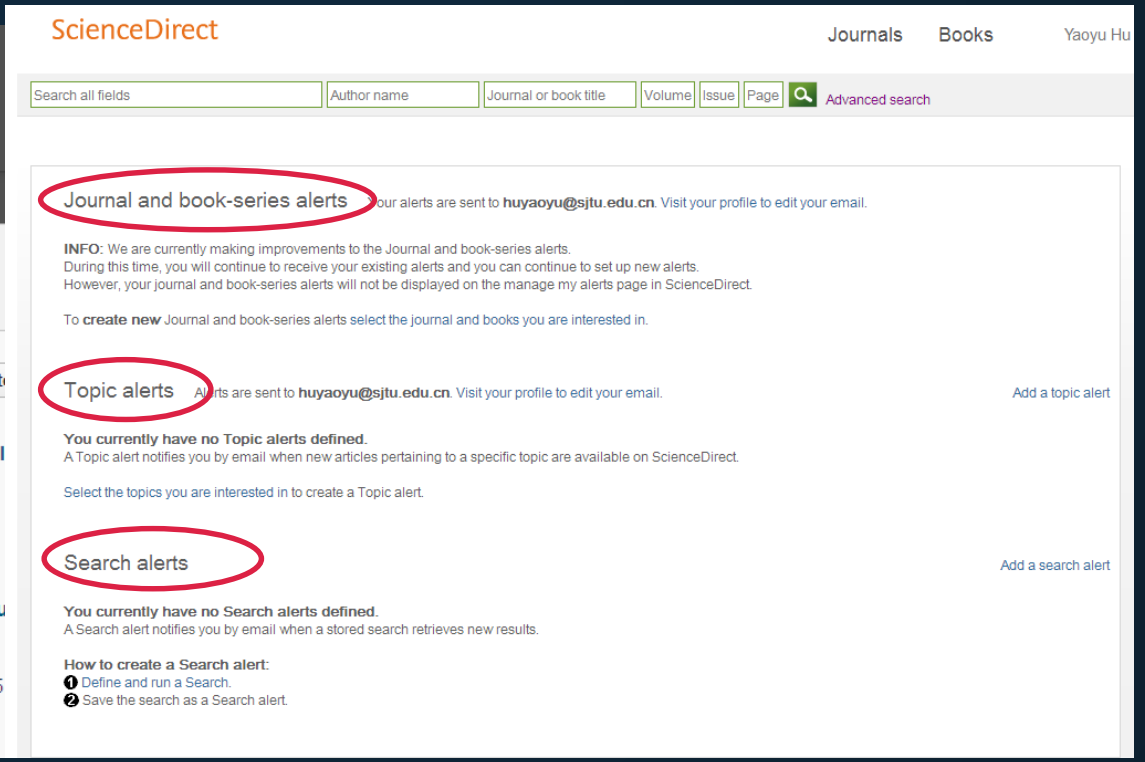
Up to date

- Some online databases provide the user with “alert” functionality.
- The user could create/register an alert with specific journals or search patterns. The system of the online database performs the search operation automatically and periodically. Generally the search result will be sent to the user by email.





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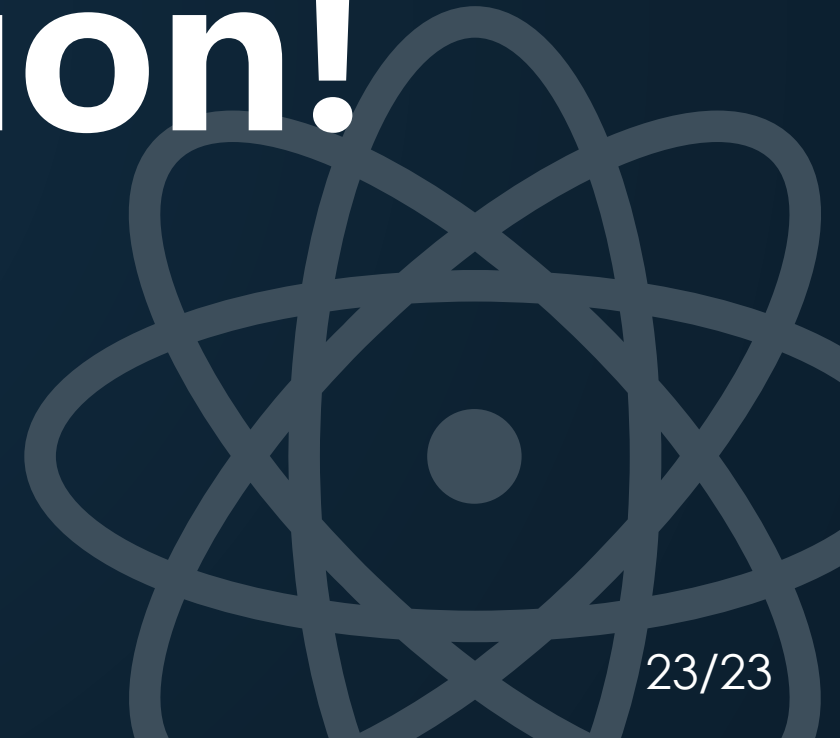
Citations

- We want:
  - Easy insertion and management when composing articles or dissertation.
  - Easy to migrate among various stylings (参考文献格式).
- Useful tools
  - EndNote
  - Zotero (Recommended)
  - Mendeley
  - BibTex

Thank you for your attention!

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