Producing a Literature Review for a Research Proposal

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 Aims at identifying, evaluating, and interpreting relevant research about a particular research question, topic area, or phenomenon of interest

Common reasons

- Summarize the existing evidence
- Identify any gaps in current research to suggest areas for further investigation
- Provide a framework/background to appropriately position new research activities
- Support/contradict hypotheses
- Assist the generation of new hypotheses



Search method

- Database search
- Backward snowballing: starting from a primary study, we retrieve related papers
- Forward snowballing: we look at other studies that cite a target primary study (Google Scholar and Scopus)

Search terms

- The collection of keywords derived from the research problem / questions
- The search string using boolean ANDs and ORs to query the digital sources
- Follow an iterative approach: initial search, add/remove/adjust keywords, repeat; consider synonyms (e.g. "Software Development / Software Engineering")



Sorted by relevance:

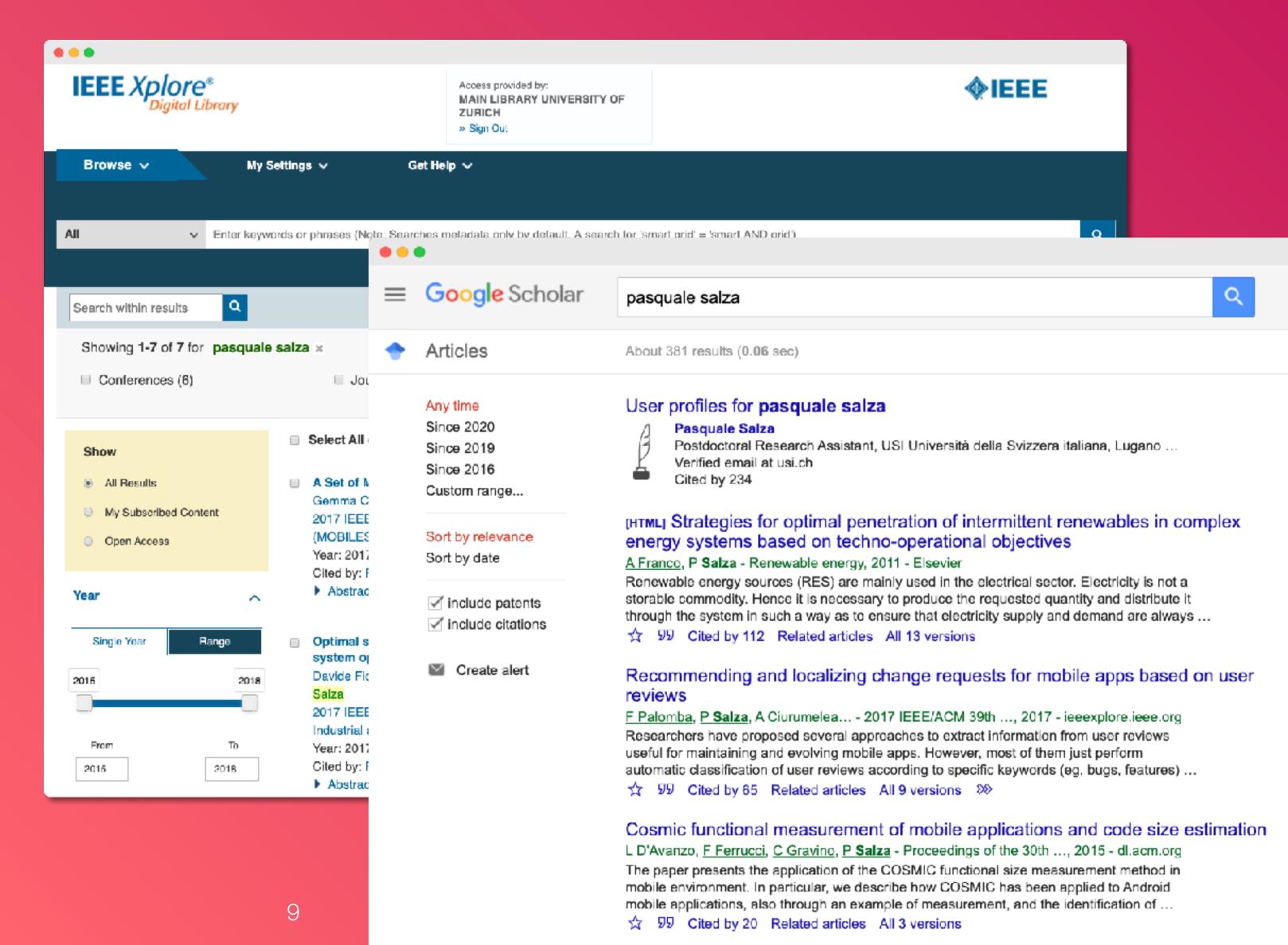
- Scientific literature, including journals and conference proceedings (via scientific databases)
- Grey literature, e.g., technical reports, work in progress, presentations (via search engines, for example <u>arxiv.org</u>)
- The internet (blogs, personal websites, ...)

Data sources evaluation

- Look up the big conferences/journals in your area of research, e.g. for Human Aspects of Software Engineering:
 - ICSE: International Conference on Software Engineering
 - CHI: Conference on Human Factors in Computing Systems
 - FSE: Foundations of Software Engineering
 - CSCW: Computer-Supported Cooperative Work
 - TSE: Transactions on Software Engineering
 - TOSEM: <u>Transactions on Software Engineering and Methodology</u>
 - ToCHI: <u>Transactions on Computer-Human Interaction</u>
- Publications from these conferences are often peer-reviewed and of high quality

Q Digital libraries

- IEEE Xplore
- ACM Digital Library
- ScienceDirect
- SpringerLink
- Scopus
- Google Scholar

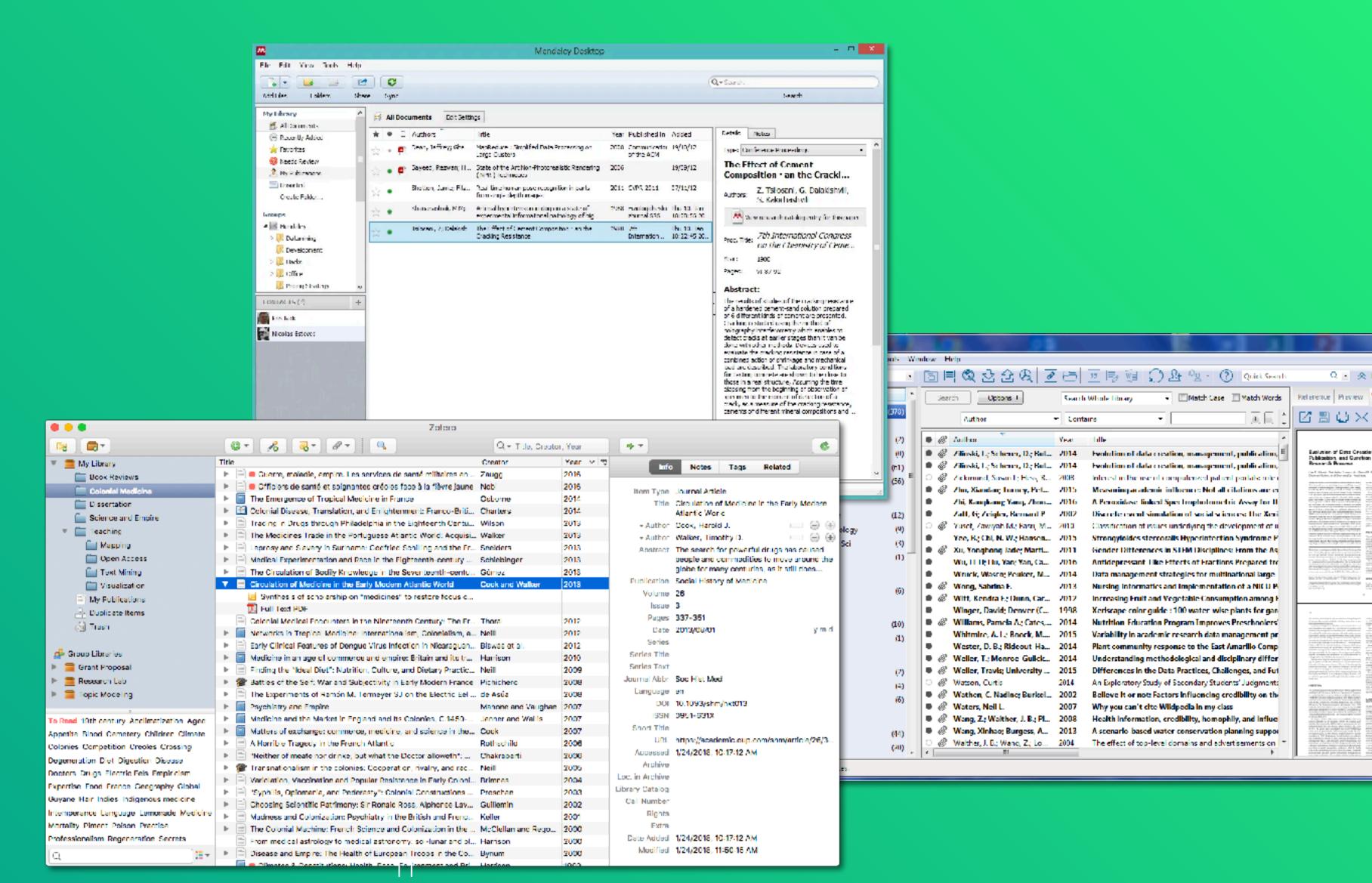






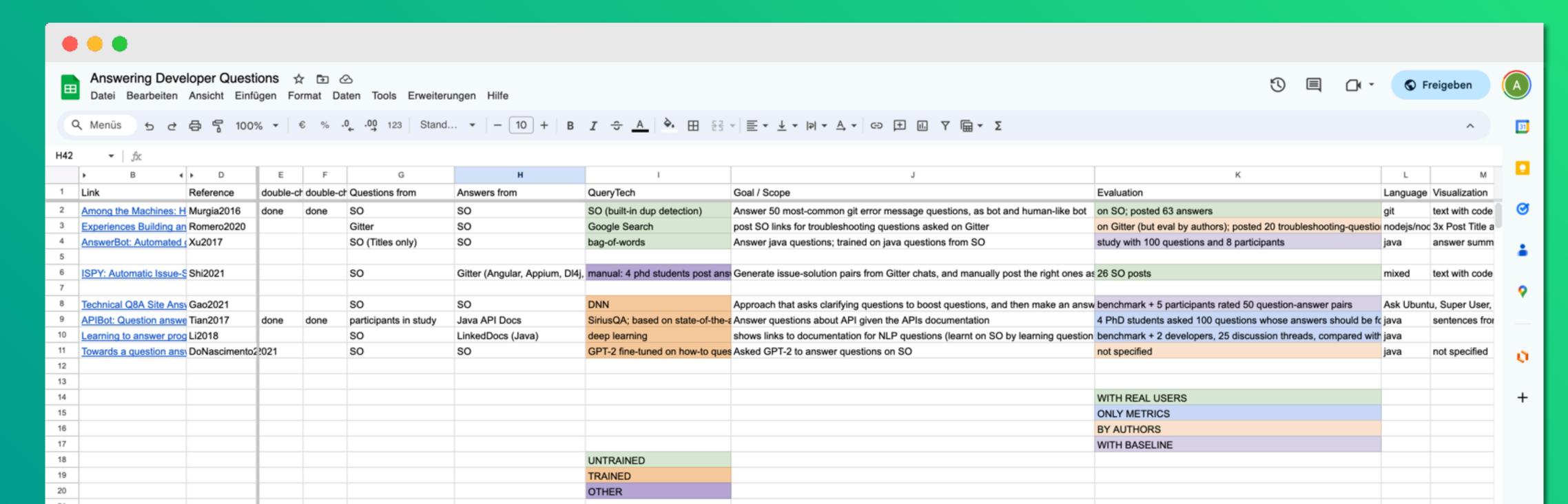
Reference managers

- Useful to store and put notes on retrieved papers
- Zotero
- Mendeley
- Endnote





- We extract relevant data from each of the selected primary studies
- A spreadsheet can be useful
- It should be done independently by two or more researchers
- Disagreements can be resolved either by consensus or arbitration by an additional independent researcher



Accessing Papers @ UZH

• Within the network of the University of Zurich you can access most of the digital libraries such as ACM, IEEE, ...

For remote access, use the UZH VPN service: https://www.zi.uzh.ch/de/students/workplace-collaboration/vpn.html

 The Google Scholar browser extension allows quick search for papers, as well as copying a reference (in clear text, or for LaTeX BibTeX)

https://chromewebstore.google.com/detail/google-scholar-button/ldipcbpaocekfooobnbcddclnhejkcpn