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Manual for Constructing Research Trails (Sciences)

(updated July 2015)

1. Download publications from the Web of Science

1.1 Search in the ISI databases

Note!: A major problem of ISI searchers is homonyms, i.e. researchers with the same name (and possibly even working in the same or a similar field). For strategies to cope with this problem – see below.
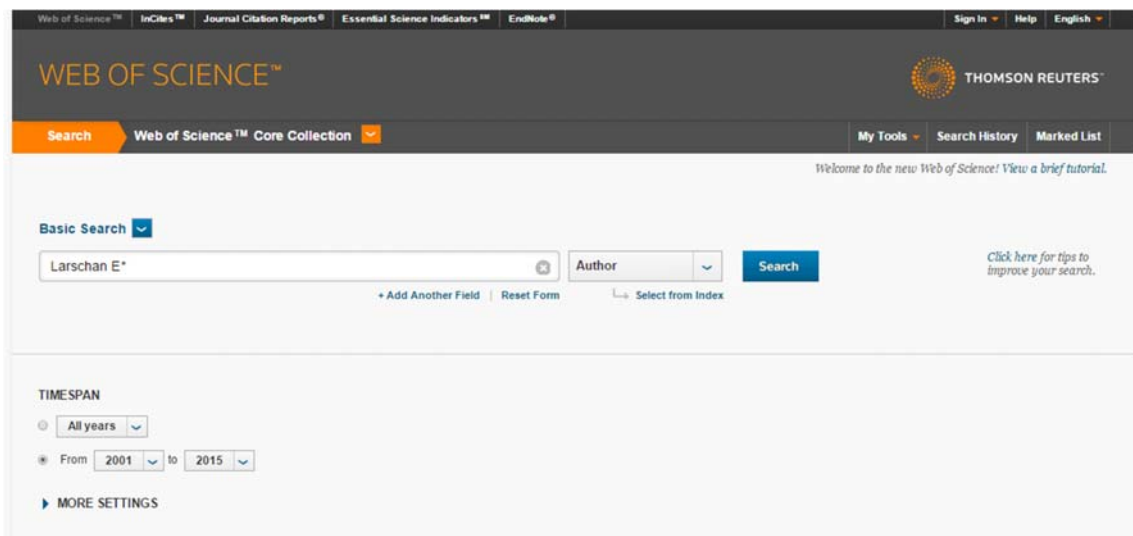
Steps:

1. Open Web of knowledge

2. Select tab "Web of Science Core Collection"

3. Write last name and initials of author in the first search field and select in "Author" on the right-hand site of this search field.

   About initials: If the author has more than one initial and uses them in his publications, the search can be limited to last name and first initial OR last name and both initials, e.g. **"Larschan E OR Larschan EN"**. It is necessary to include the version with only one initial because some authors not always use both initials.

   If there is no information about the existence or use of initials, the last name and "initial*" must be put in, e.g. **"Larschan E*".**

4. Limit years. If no list of publications of the author is available from other sources, the first year should be ca. five years prior to the time at which the PhD was granted. Last year will be usually the current year.

5. Limit databases to "**Science Citation Index Expanded**" and maybe "**Conference Proceedings Citation Index- Science**"[1] Click "search".

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[1] Often the conference papers will appear later as a journal article again. Frequently, conference papers might be just abstracts without references. So, they can't be clustered by bibliographic coupling. However, occasionally there are

6. In the result-list, select the relevant publications by

- ticking them one by one (to avoid homonyms), then click "Add to Marked list"
- if there are no homonyms or if they have been removed, go to "Add to Marked list", select "Records", fill in "1 to [number of records]".

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highly cited conference papers (with references) which do not occur as articles later! Therefore it is better to check before dismissing them.

How to cope with the problem of homonyms:

- get a full publication list of the scientist
- if there are publications of the scientist that could not be found through the initial Web of Science search it is often helpful to search them individually by title
- get other background information about the scientist (particularly about his or her career)[2]
- get information about the scientist's research field and topics
- Use the "Refine results" options: exclude under "Document types" types of publications (meeting abstracts, corrections, news items)[3]
- the "Refine results" options can also be used for "Authors" and "Web of Science Categories" to further narrow down the search results
- look up if earlier papers are cited later by the same author (to track down institutional affiliations of the scientist)
- look up full paper online versions of articles to track institutional affiliations

Including publications by these other authors can partly be avoided by making the search as specific as possible. This can be achieved by working with the initials or by excluding particular addresses.

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[2] If there is no information on the scientist's homepage, you could try a Google search: "[Full name of scientist] CV" or "[Full name of scientist] PhD". Sometimes, background information will pop up.
[3] But be careful, sometimes ISI puts important papers under strange categories
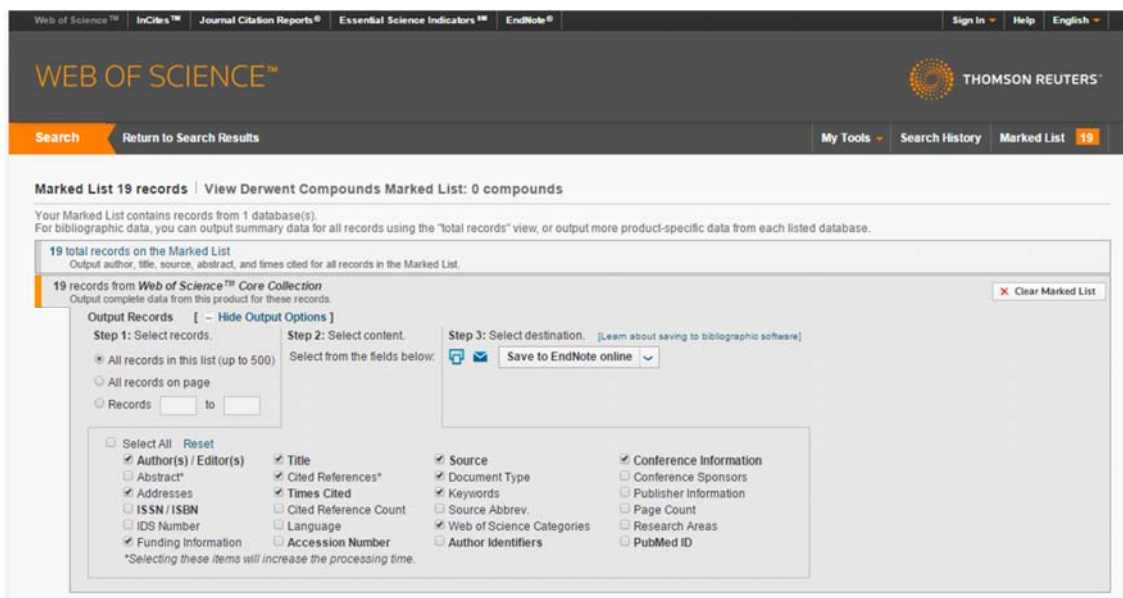
1.2 Save records

Steps:

7. On the ISI page, click on "**Marked list**". A page with output options will appear.

8. Include the following fields in the output by unselecting some ISI standards and selecting other fields:

> **Author(s) / Editor(s)**,
> **addresses**,
> **Title**,
> **cited references***,
> **times cited**
> **Source**
> **document type**
> **keywords**
> **Web of Science Categories**

9. Go to "Step 3: Select destination" and chose "Save to Other File Formats". As "File Format" selected "Tab-delimited (Win)", then "Send"

Records will be saved as text files. ISI creates those always with the same name, "savedrecs.txt". This is why some care is required in not overwriting old downloads with new ones.

10. Click "**Open with Notepad**". In Notepad press "Save as" and rename the file to "[scientist's name].txt", e.g "**Larschan.txt**" . Chose the folder in which your Excel workbook "Makros_BibCoupling.xls" is stored.

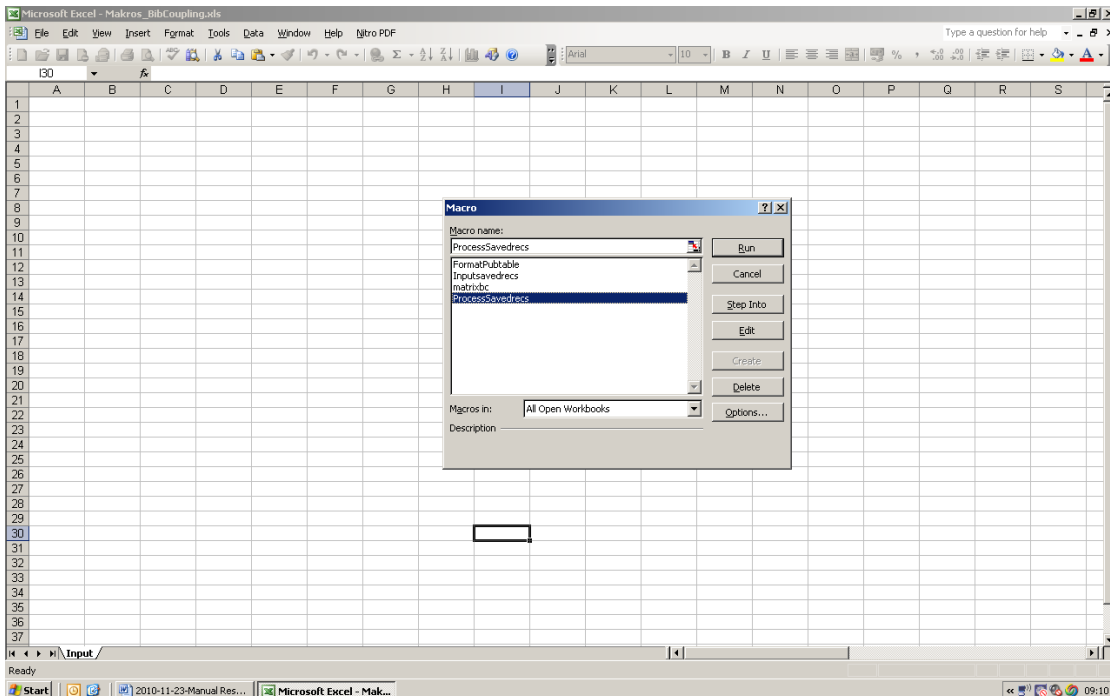## 2. Analysis: Processing the downloaded records

This should all go automatically now. If the Macro complains, do a screenshot and contact Jochen or Grit.

<u>Steps:</u>

11. Open **Excel** (Set Macro security to "medium" by going to "File – Options – Trust Center – Trust Center Settings – Macro Settings – Enable all macros")

12. Open "**Makros_BibCoupling.xls**"

13. Start the macro "ProcessSavedrecs" by going to View – Macros –View Macros …, selecting it from the list, and clicking "Run". If you cannot chose "ProcessSavedrecs" directly you first have to select from the field 'Macros in' the option 'This workbook'.

    The macro will
    - ask you to open a file, for which you must select your ISI text file (click through the folders to find it),
    - import this text file,
    - analyse it,
    - save a file "[name of researcher].xls" with the results of the analysis, and
    - rename "savedrecs.txt" as "[name of researcher].txt" if you opened the original ISI file before renaming it.

14. Print the list of publications (either directly from excel or after transferring it to Word)

- If you transfer it to Word you can use Grit's Macro "FormattingPubtableInWord"[4] for the formatting operations in Word.[5]

3. Drawing the picture

We first create a raw picture (network) in Pajek and then export it to a graphics programme for further formatting and adding details. For details please use the "Manual Pajek network pictures"

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[4] Copy it in your Normal.dot, then you don't have to link each new file with the SCIPubTable.dot template.
[5] You may delete the address field if it is taking too much space.