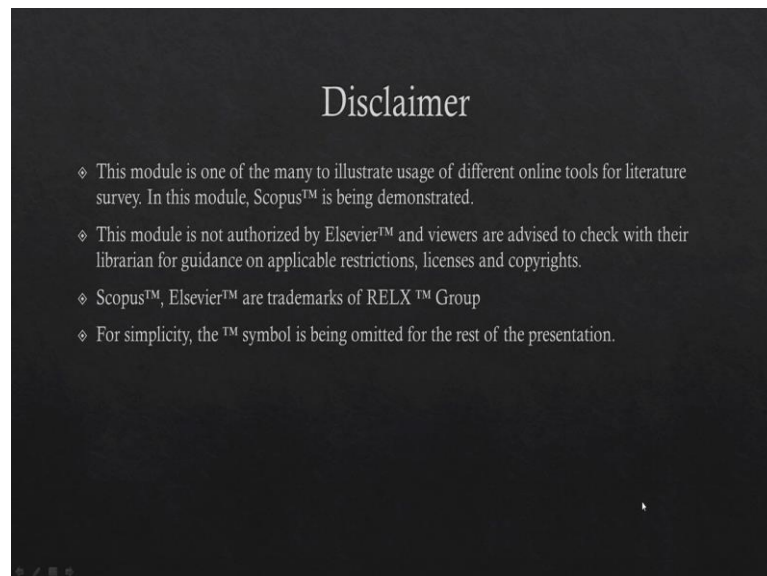


Introduction to Research
Prof. G. Phanikumar
Department of Metallurgical and Materials Engineering
Indian Institute of Technology, Madras

Lecture – 08
Literature Survey Using scopus TM

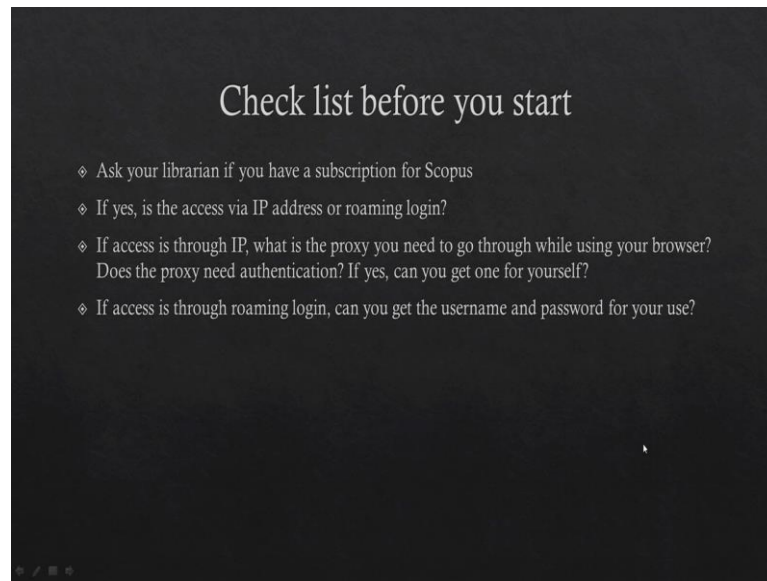
Yeah. This is the second part of the Literature Survey module, on how to use tools such as Web of Science and Scopus to collect bibliographic data on to your desktop. The objective being that these data can then help you write an article or your thesis and populate the bibliographic fields in your thesis without having to type out every different bibliographic data field that you need and this second part of the module I am going to use Scopus as a source of bibliographic data.

(Refer Slide Time: 00:43)



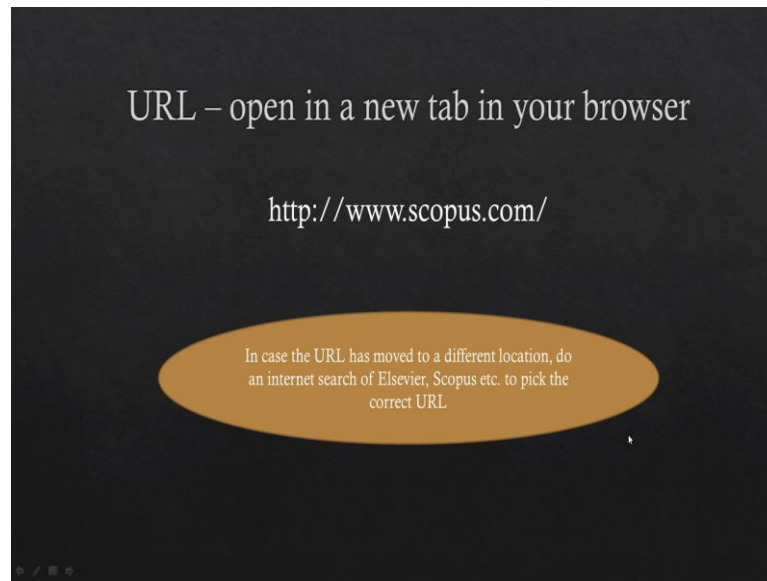
As usual again we must make a disclaimer.

(Refer Slide Time: 00:47)



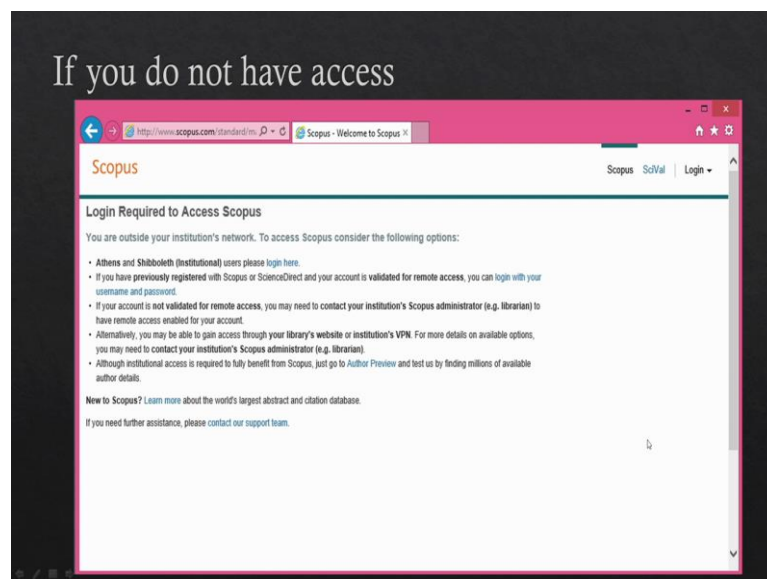
This is a Check list that we must have before we start a literature survey using the Scopus as a tool. We must obviously ask whether we have access to the Scopus tool. So, please do ask your librarian if you have subscription for Scopus and if yes, then is the access via an IP address or a roaming login and if the access is through IP address, whether do you need to access it through a proxy, and if it is through proxy then whether it needs a user name and password and whether you have such a user name and password with you to be able to start the literature survey using this particular portal. If it is through a roaming login then you must get the user name and password for you to login through the portal.

(Refer Slide Time: 01:29)



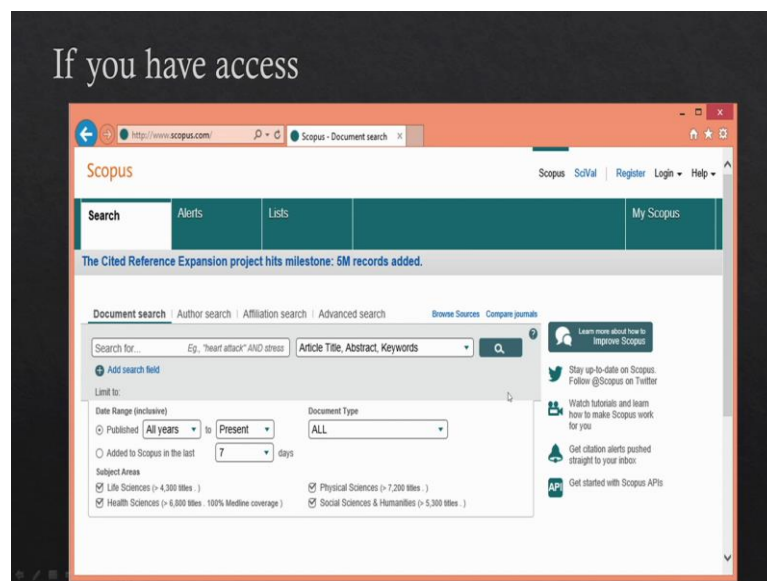
So, assuming that you have the information then we can go on to now start the literature survey on this portal and I have given the URL of this portal here and in case the URL of this portal happens to change because the vendor or the company has changed then please do search the internet for the words like Elsevier and Scopus and identify the correct URL.

(Refer Slide Time: 01:52)



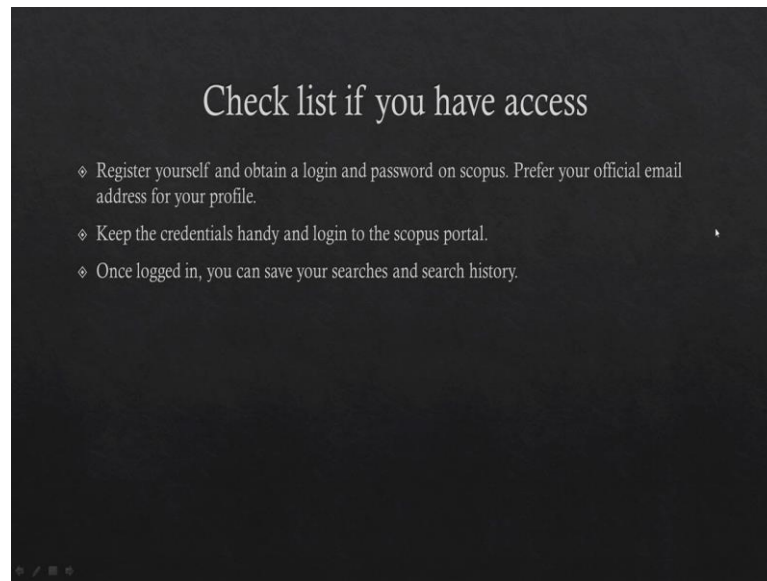
In case, you do not have access and you want to open this portal then this is the screen that you will see. Namely the screen will not let you search for anything and it will ask you to login because it detects that you are logging in or trying to access from outside your institutions network. If you have already registered for access through your institute at least once then it may detect that you have logged in and provide you a partial access. However, you need to actually login before you start any process.

(Refer Slide Time: 02:26)



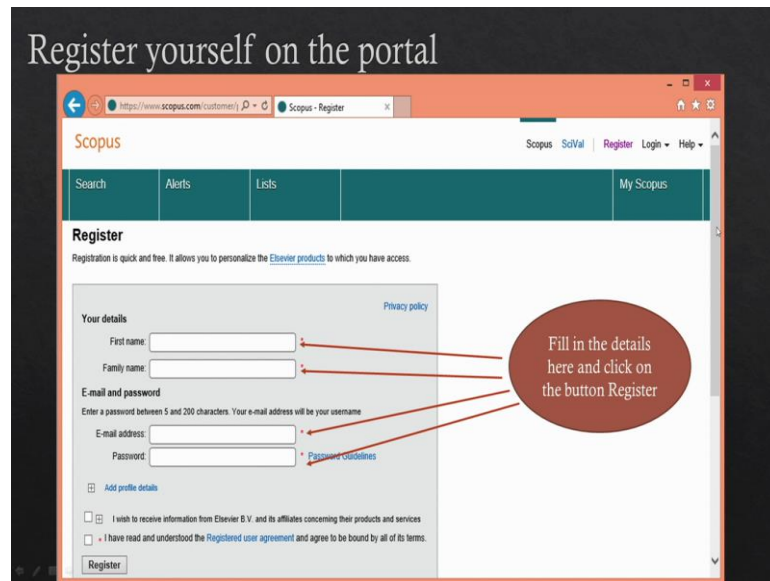
And this is how the front page would look like, in case you have access, which means that you are ready now to search because the search form is readily available for you and I advice that you can register and login before you start searching because you can actually keep the history of your literature survey and all the search results in organized fashion in your own profile and that will be helpful for you to start off your work from where you left last time you did the literature survey.

(Refer Slide Time: 02:56)



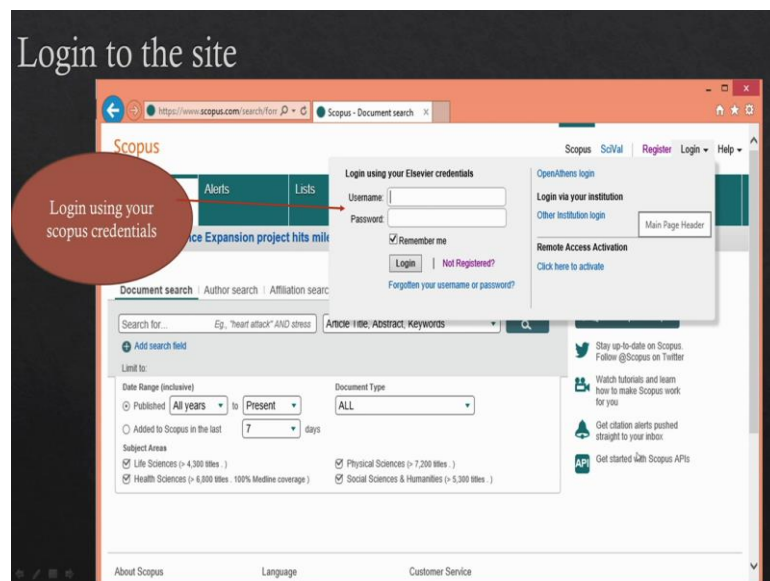
So some check list before you can start the process, register yourself, obtain a login and password on Scopus and again for the profile you must use official email, so that you will be able to show your affiliation to an institute while you do your literature survey and have these credentials handy, so that you can login to the portal whenever you are required to do the literature survey and once you are logged in you can save your searches and search history.

(Refer Slide Time: 03:25)



This is how it looks like; when you click on the link register there is a small form that will be shown to you. You can fill all these fields, naturally you are **expected** to agree to the license terms and then register.

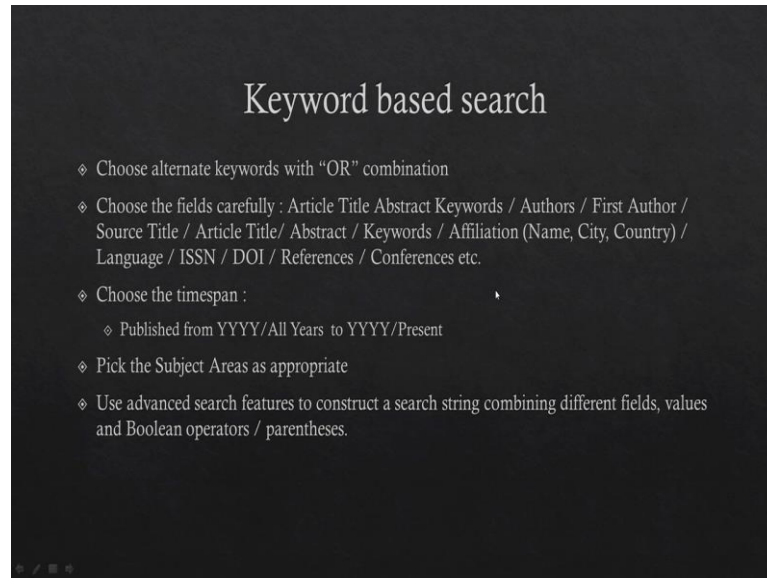
(Refer Slide Time: 03:40)



Once, you register then you can login by using this login form and you can ask the portal

to remember your login so that you can perform the literature survey in different sessions without having to login a second time.

(Refer Slide Time: 03:53)

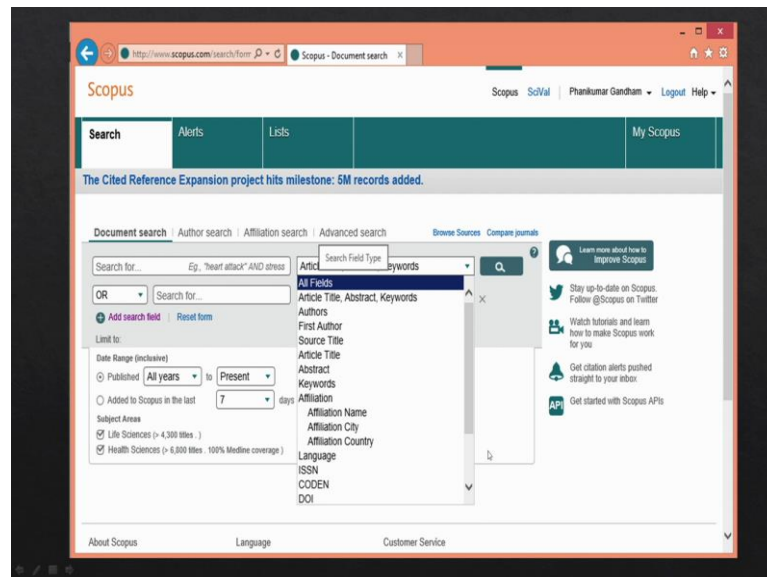


So, we are going to show a demonstration using a Keyword based searched and we are going to use a same set of keyword as we have seen in the other module on Web of Science. We must choose fields very carefully. The set of fields that are available in Scopus are slightly different from those that are available in Web of Science. You can actually choose Article, Title, Abstract, Keywords all of them together and search for a set of keywords in that or you can choose them in Authors, First Authors, Source Title, Article Title, Abstract, Keywords, Affiliation Name, etcetera.

You should also pay attention to the timespan and you can choose the timespan either from a particular year to another year or you can choose all years till the present, so that the search will be done across the entire database. For a person who is doing the literature survey on **a** topic for the first time, it is advised that the entire timespan is used for literature survey. The subject areas also have to be chosen up for appropriate links to show up. An engineering topic need not be searched, for example in the medicine area and vice versa. However, it is again advisable to keep all the subject areas open, so that you may find interdisciplinary results that will be showing up.

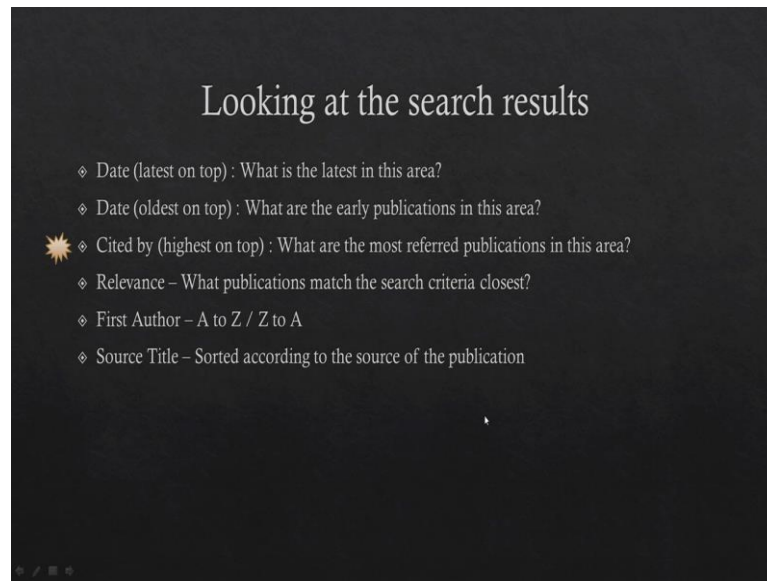
You can actually also perform advance search features using a search string that can combine different fields, values, Boolean operators and parentheses, if you are already familiar with advanced programming or SQL syntax.

(Refer Slide Time: 05:21)



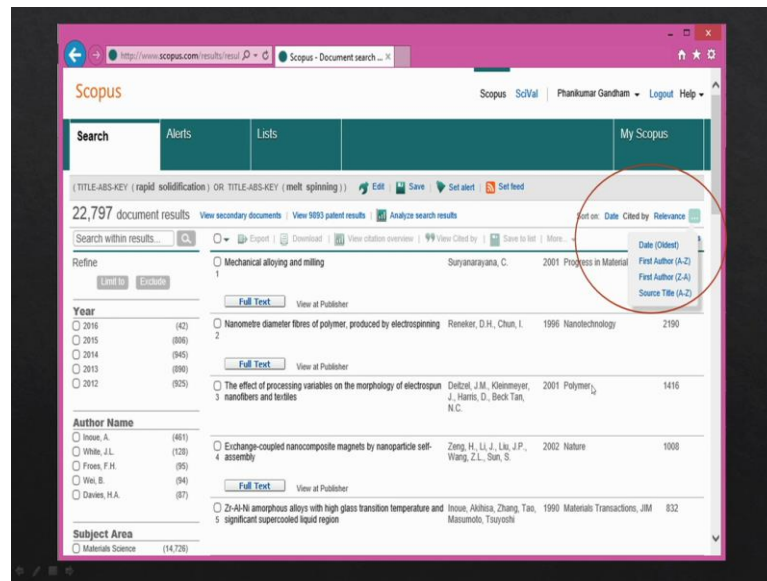
And this is the form that is used to search for the literature. This is at the front page, I have already logged in as you can see from my name here and the search history then will be stored in my profile. You can actually have **multiple** fields and you can add additional fields by using the plus button here and you can combine your searches across multiply fields using either OR or AND, I would advise OR because you can get a union of all the different results. In what fields should you search this keywords for is evident here, you can press this dropped down menu and you would see a list of fields that will be appearing.

(Refer Slide Time: 06:02)



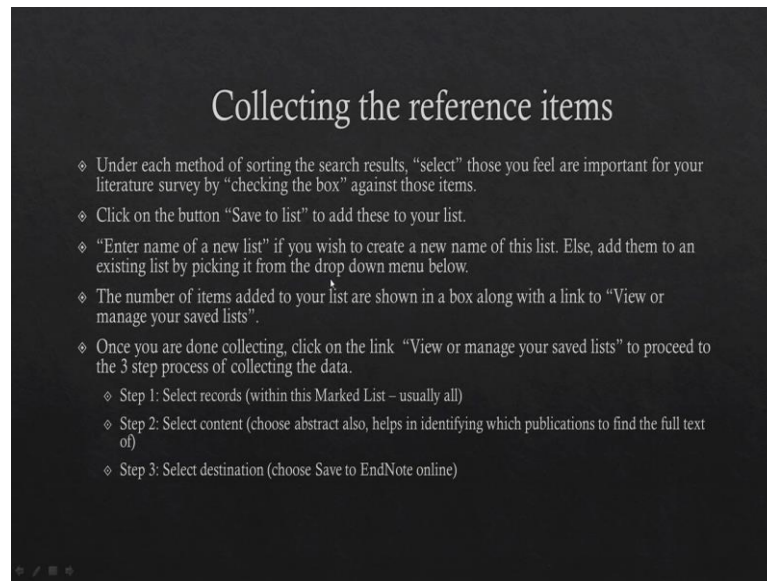
And what are the various fields, you can actually see that the fields are available in such a way that you can choose from the dates, the citations, the relevance, the first author and both forward and backward sorted order as well as from the title and here I have put a star again is the cited because **it's** very important for a novice researcher to identify, what are the publications that are referred by large number of researcher in this area, so that you identify the important pieces of work in this area immediately.

(Refer Slide Time: 06:34)



And I have searched, as an example for 2 phrases, rapid solidification and melt spinning and combined them with the Boolean operator OR, so that I am getting a union of these two and I have obtained number of hits 22000, which means that this is a fairly mature area of research. On the right hand side you can see that these results can be sorted by date, citations and relevance and in this 3 dots, if you click, you get 4 more ways of sorting, namely the inverse of the date search. Basically, here the oldest paper will be coming on the top and the first author searching both backwards and the forwards sorting order as well as the source title.

(Refer Slide Time: 07:15)

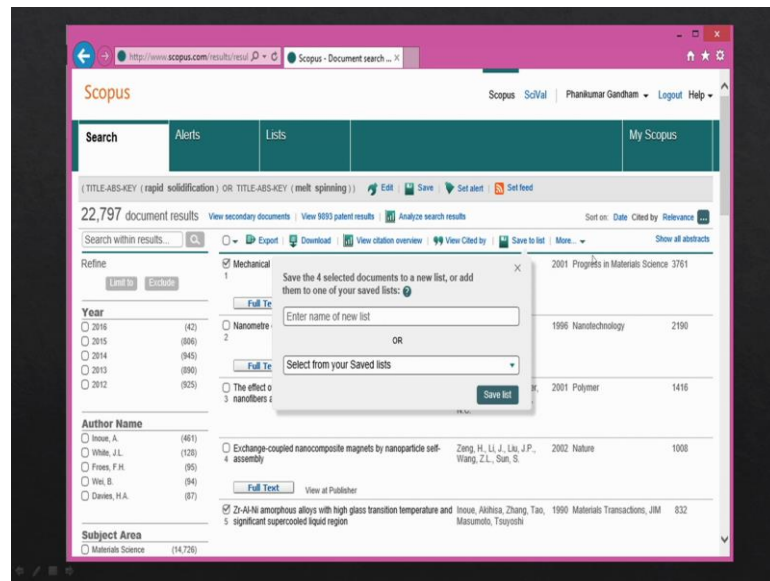


Collecting the reference items

- ◆ Under each method of sorting the search results, “select” those you feel are important for your literature survey by “checking the box” against those items.
- ◆ Click on the button “Save to list” to add these to your list.
- ◆ “Enter name of a new list” if you wish to create a new name of this list. Else, add them to an existing list by picking it from the drop down menu below.
- ◆ The number of items added to your list are shown in a box along with a link to “View or manage your saved lists”.
- ◆ Once you are done collecting, click on the link “View or manage your saved lists” to proceed to the 3 step process of collecting the data.
 - ◆ Step 1: Select records (within this Marked List – usually all)
 - ◆ Step 2: Select content (choose abstract also, helps in identifying which publications to find the full text of)
 - ◆ Step 3: Select destination (choose Save to EndNote online)

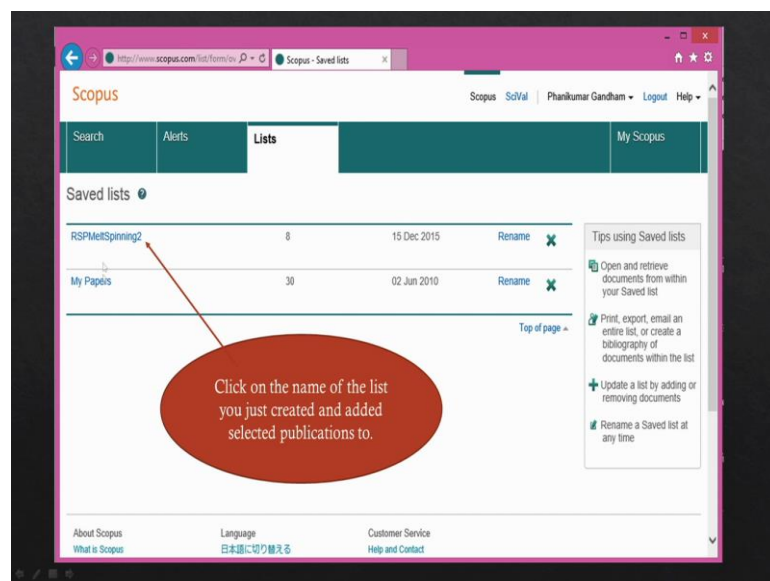
And how do we then collect the reference items that we need from this list. What we need to do is, for each method of sorting the results, we should select those we feel are important for our literature survey by checking the box against those items and then when we can click on the button save to list to add these to our list and then we can click on the item enter the list name of a new list if you want to create a new name for this list or we can also add them to an existing list that we have created just now. The number of items added to the list will be shown and we must verify that against what we are searching. **And** once we are done with collecting then we can click on the link view or manage your saved list, so that we can go to a three step process in collecting the data.

(Refer Slide Time: 08:01)



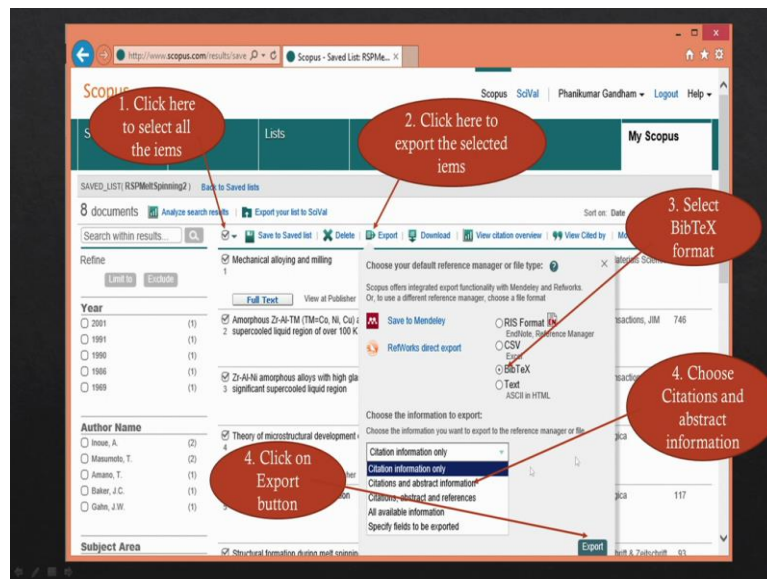
I am illustrating them here, you can use this click buttons to identify those articles that you want to collect and then click on the saved list button here and it will open up a dialogue, asking you whether you want to save these items as a new list or an existing list. You can choose as appropriate and click on the saved list and those items will be in your list.

(Refer Slide Time: 08:25)



And those lists are then shown to you here and you can see that I have just given a name called RSP Melt spinning 2 for this literature and I have only identified 8 publications right now to save. And if you click on this link then you can see those items that we have just now identified and they are listed here.

(Refer Slide Time: 08:43)

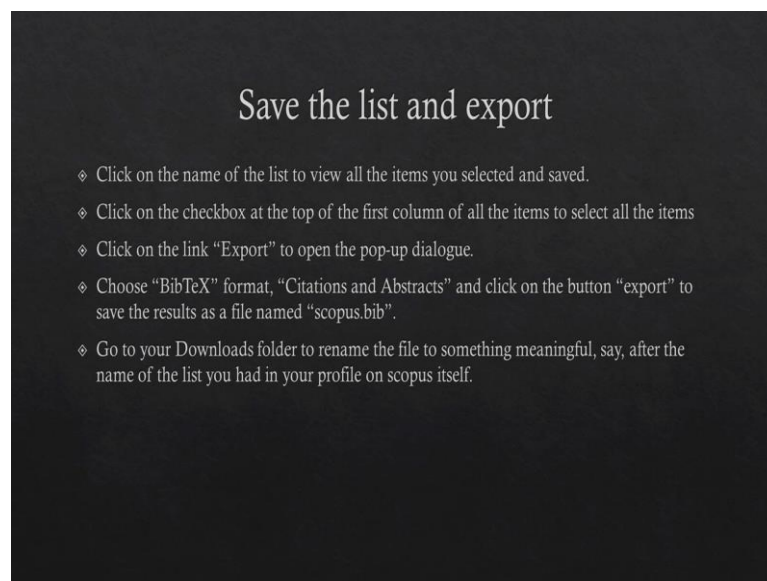


What is the process now to export them? This is quite straight forward, we have taken efforts to sort in a different manner and identify most important publications. Therefore, all these we can actually pick up for our literature survey. So we can click on this button here, where you can select all the items that you have identified. This will not pick all the items for the search that you have originally made but for only those which you have picked and added to your list.

So first we select all of them, the second is to click on the export button and that will open up a dialogue here. The dialogue is fairly elaborate. In the dialogue, we must choose a format of the data that we want to take. The format can be chosen to be RIS format, CSV format for excel, BibTeX or text format. I would advise you to choose the BibTeX format because that is the native format for many reference management software and also it can be converted later to other formats. What information do you want to take along to this BibTeX format is again available here, you can click on this

dropped down menu and you can choose as I would advise citations and abstract information because very often it is important to read the abstract, so that we can identify those among these publications that require you to go to the full text. Once, you have chosen the options here then you can click on the button export here, to export these data as a BibTeX file on to your desktop and it will come to your desktop as a file that can be saved in your downloads folder.

(Refer Slide Time: 10:15)

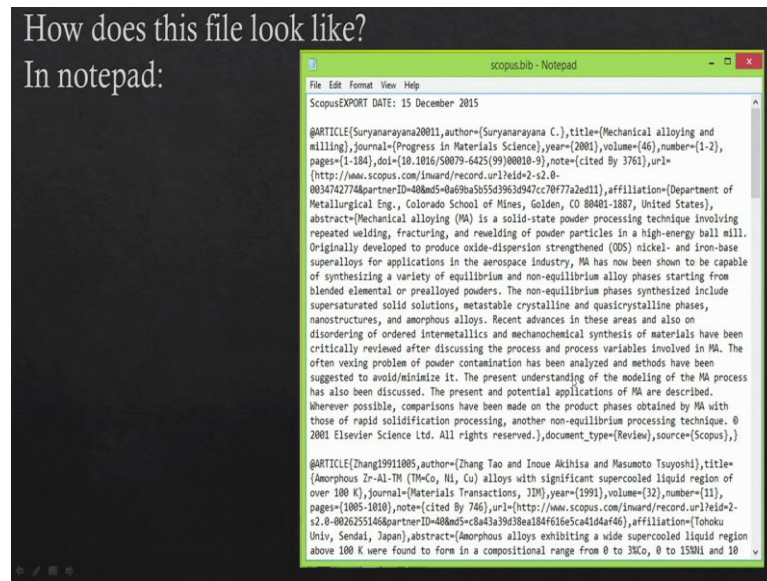


Save the list and export

- ◆ Click on the name of the list to view all the items you selected and saved.
- ◆ Click on the checkbox at the top of the first column of all the items to select all the items
- ◆ Click on the link "Export" to open the pop-up dialogue.
- ◆ Choose "BibTeX" format, "Citations and Abstracts" and click on the button "export" to save the results as a file named "scopus.bib".
- ◆ Go to your Downloads folder to rename the file to something meaningful, say, after the name of the list you had in your profile on scopus itself.

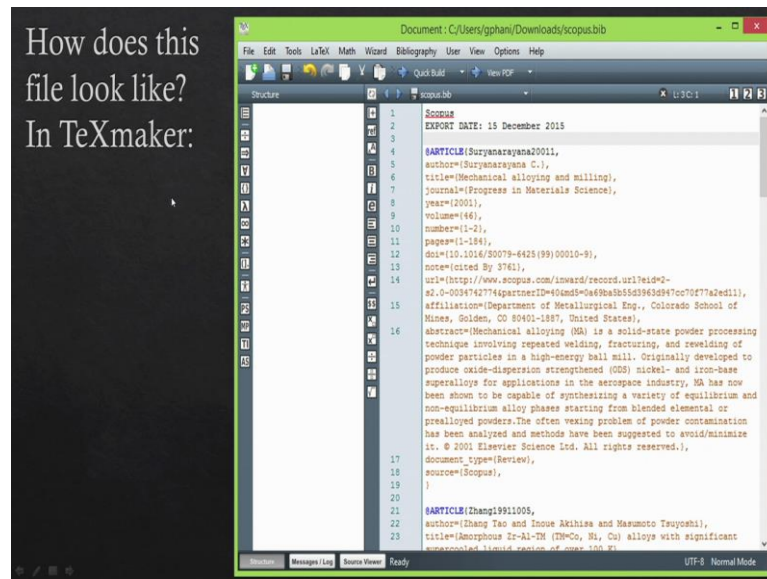
Ok, here is the summary that we have done, click on the name of the list to view all the items that you selected and saved. Click on the check box at the top of the first column of all the items to select all the items. Click on the link export to open up the pop up dialogue. Choose BibTeX format citations and abstracts and click on the button export to save the results as **a** file named Scopus dot bib. Go to your downloads folder to rename the file to something meaningful. For example, you can give the same name as the list that you have written and you can store it in a safe place that you can look up later on.

(Refer Slide Time: 10:48)



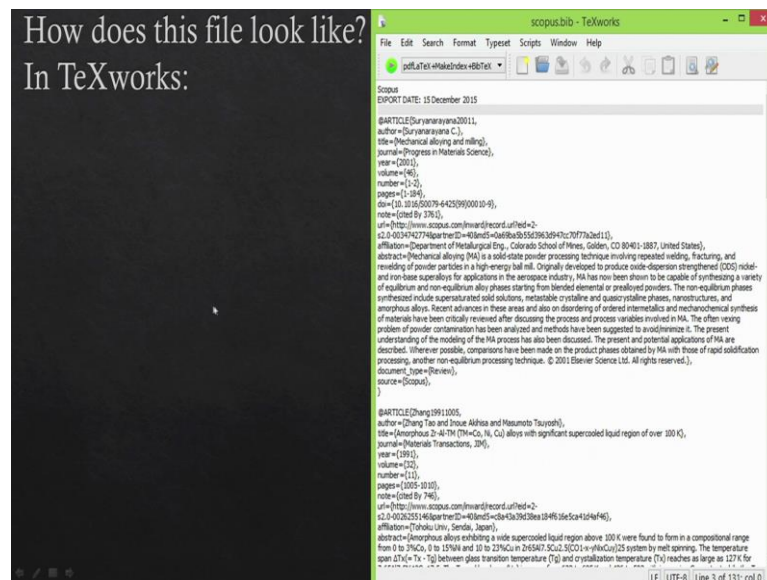
How does this file look? It is very much similar to the other demonstration we did on Web of Science. In a note pad it would like this, every item would have, at symbol and an article type followed by the data which is human readable. The full text is available in ASCII format, you can read it here. You can also use the notepad to cut and paste different bibliographic items from different bib files that you may want to combine or split.

(Refer Slide Time: 11:14)



In TeXmaker, it would look like this neatly organized by different fields.

(Refer Slide Time: 11:20)



In TeXworks, it would look like this again neatly organized. These two tools, TeXworks and TeXmaker are freely available for all the platforms for you to install.

(Refer Slide Time: 11:30)

This is how the file looks like in JabRef

#	Ranking	Entrytype	Author	Title	Year	Journal	Bibtexkey
1		Article	A.	PRINCIPLES OF MELT-SPINNING	1967	Man-Made Fibers. Socn.. ZHIBCKOA1967169	
2		Article	Ahmed et al.	Zr-Al-Ni amorphous alloys with high glass transition te.	1990	Materials Transactions, J. Jsose1990177	
3		Article	C.	Mechanical alloying and milling	2001	Progress in Materials Sci.. Suryanarayana20011	
4		Article	J.C. and J.W.	Solute trapping by rapid solidification	1969	Acta Metallurgica Baker1969575	
5		Article	K. et al.	Structural formation during melt spinning process	1968	Kolloid-Zeitschrift & Zeits.. Katayama1968125	
6		Article	M.E. and R.J.	Investigation of solidliquid interface temperatures via L.	1967	Journal of Crystal Growth Glicksman1967297	
7		Article	Tao et al.	Amorphous Zr-Al-Ti (Ti+Cu, Ni, Cu) alloys with signifi.	1991	Materials Transactions, J. Zhang19911005	
8		Article	W. et al.	Theory of microstructural development during rapid soik..	1986	Acta Metallurgica Kurz1986823	

Article (Inoue1990177)
Ahmed, I., Tao, Z. & Tsuyoshi, M.
Zr-Al-Ni amorphous alloys with high glass transition temperature and significant supercooled liquid region
Materials Transactions, JIM, 1990, 31, 177-183

Abstract: Amorphous Zr-Al-Ni alloys exhibiting a wide temperature region of supercooled liquid state and a high reduced glass transition temperature (T_g/T_m) were formed over a composition range from 0 to 37 at% Al and 3 to 67% Ni by melt spinning. The temperature span $\Delta T_x (=T_x - T_g)$ between T_g and crystallization temperature (T_x) reaches as large as 77 K for Zr60Al15Ni25. The T_g/T_m is also as high as 0.64 in the vicinity of Zr60Al20Ni20 and their Zr-Al-Ni alloys are concluded to have a large glass-forming capacity. The T_x and hardness (Hv) increase with increasing Al and Ni contents in the range from 660 to 860 K and 400 to 720, respectively, and the tensile strength also has a similar compositional dependence in the range of 1335 to 1720 MPa. The compositional effect on T_x and Hv was presumed to originate from the variation of the atomic configuration which reflects the equilibrium compounds, because of the similarity in the compositional dependence among T_x , Hv and the melting temperature of the compounds. The high thermal stability of the Status:

And my favorite would be then JabRef, which is a software that will let you show the literature data as a spreadsheet and here we can see and we can identify any of these items, double click to edit and add notes and we can read the abstract within the software itself and you can also export the data in multiple formats.

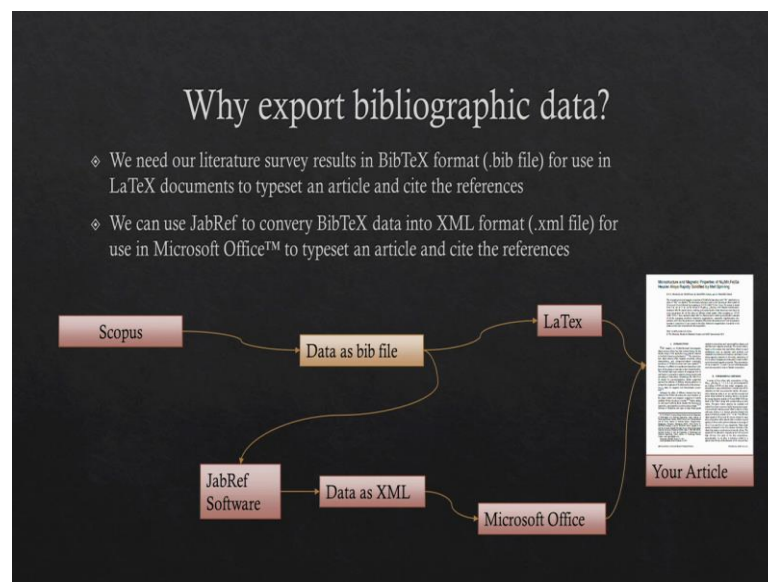
(Refer Slide Time: 11:51)

How to edit this .bib file?

- ◆ Use a Reference Manager like JabRef (opensource and free)
- ◆ Spreadsheet like appearance
- ◆ Possibility to add notes, split and merge similar files, export to different formats
- ◆ The file resides on your desktop – go through the items at your pace, offline, identify those you need to have the full text of and so on.

And how do we edit this bib files so that we can mix and match, combine, etcetera? We always need a reference manager and I would suggest JabRef because it is open source and free and it **has** a spreadsheet like appearance. **And** JabRef gives you the possibility to add notes, split and merge different files, export different formats. What is more important is that these files resides on your desktop, which means that you can go through these items at your own pace offline and identify those among these papers **where** you want to the read the full text.

(Refer Slide Time: 12:22)



And why do we need to export this bibliographic data, again the logic is similar to what we have shown on Web of Science demonstration. Scopus is giving you the data as a bib file directly and you can use this bib file, **LaTeX** software to create your article. You can also use JabRef software to convert the bib file to an XML file, which can be used in Microsoft Office to create your article. In other words, you can perform a literature survey in a citation database such as Scopus, export the data and use it directly using typesetting software such as LaTeX or Microsoft Office to generate your article, references at the end of the article and you can also use it for your thesis.

Thank you.