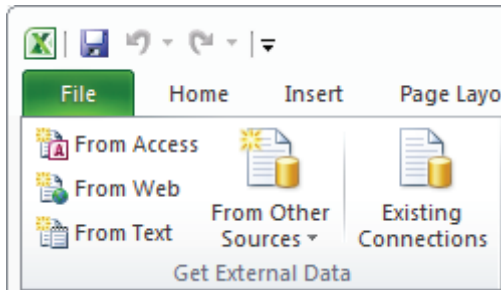
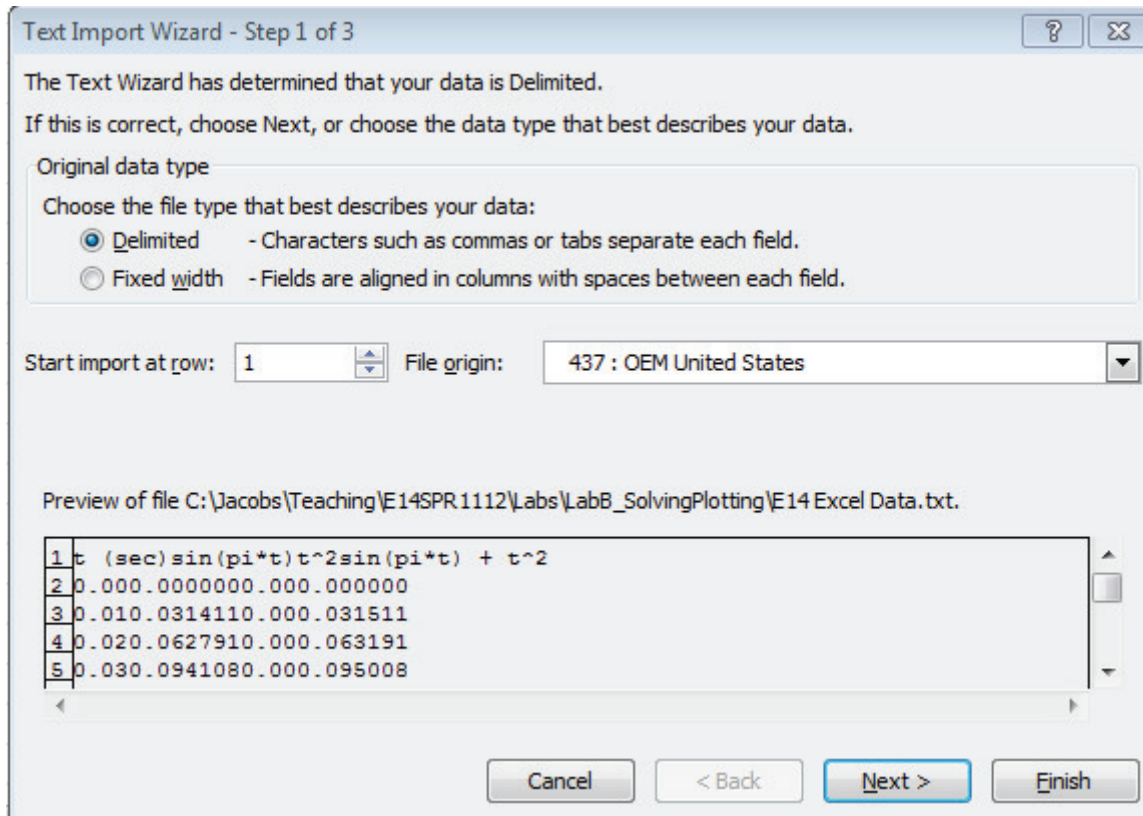


Importing:

Click on the Data tab in the top menu. In the Get External Data menu click on from Text.

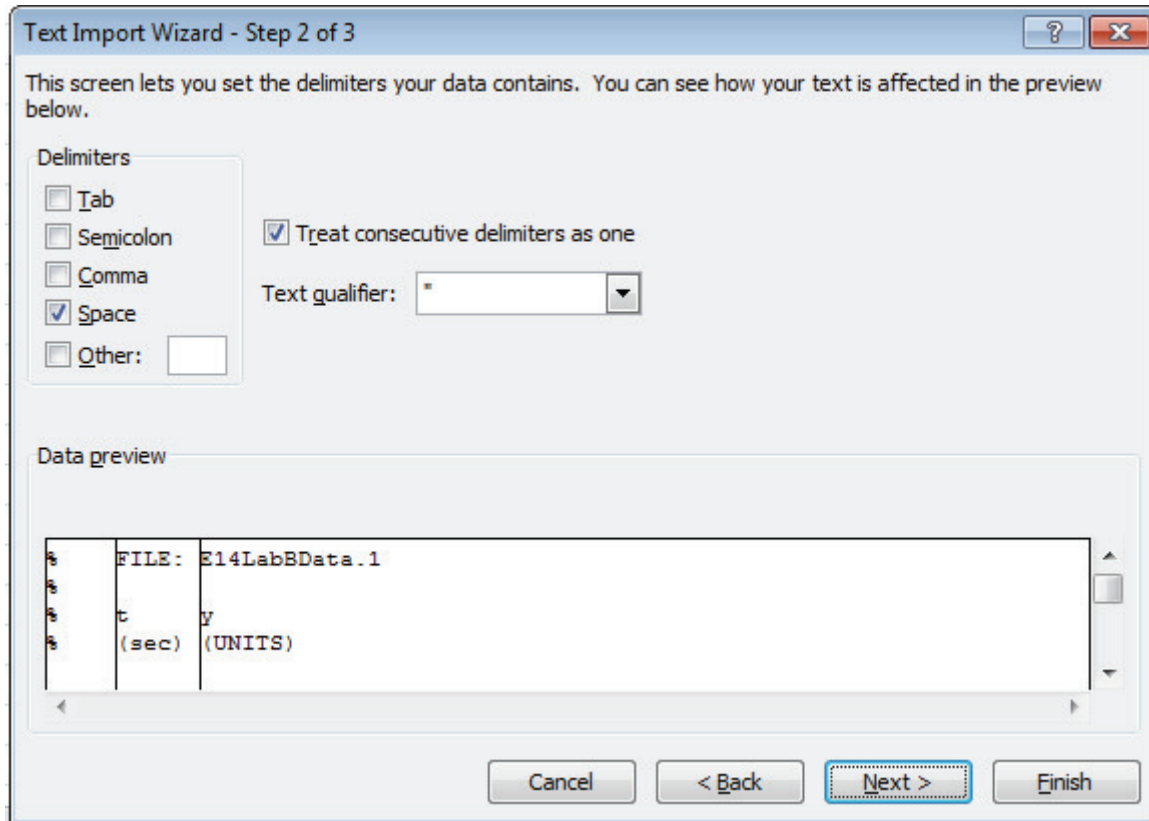


Navigate to your file and click import. You may need to change the search to all files if you are importing a file from MotionGenesis. After you click, the Text Import Wizard opens

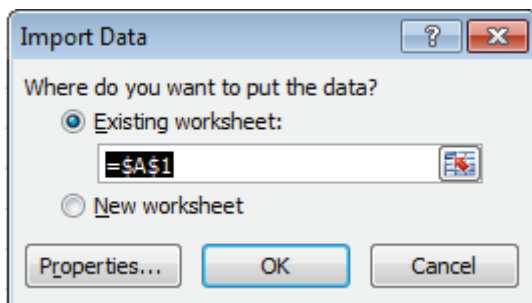


For the next few steps, use the preview at the bottom to check the columns. Our text file is delimited which means there is a specific character that separate columns. Common Values are the semicolon, the comma and the space. This file is separate by spaces.

Set the “Start import at row” based on when your numerical data begins. Select Delimited and hit next.

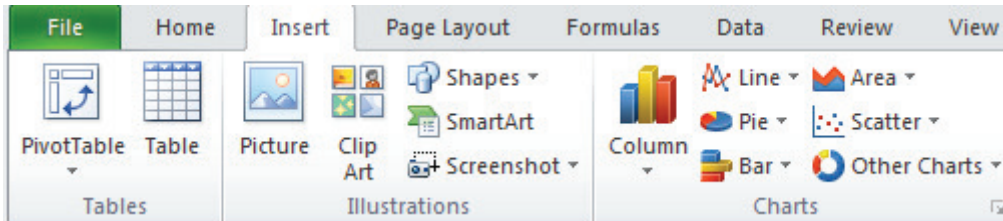


Unselect the default Tab delimiter and select Space. As there are multiple spaces, for this file you will check the “Treat consecutive delimiters as one” box. If you are importing dates or for any reason need to use the excel formats other than general hit next. Check that the preview shows the correct columns and hit finish.

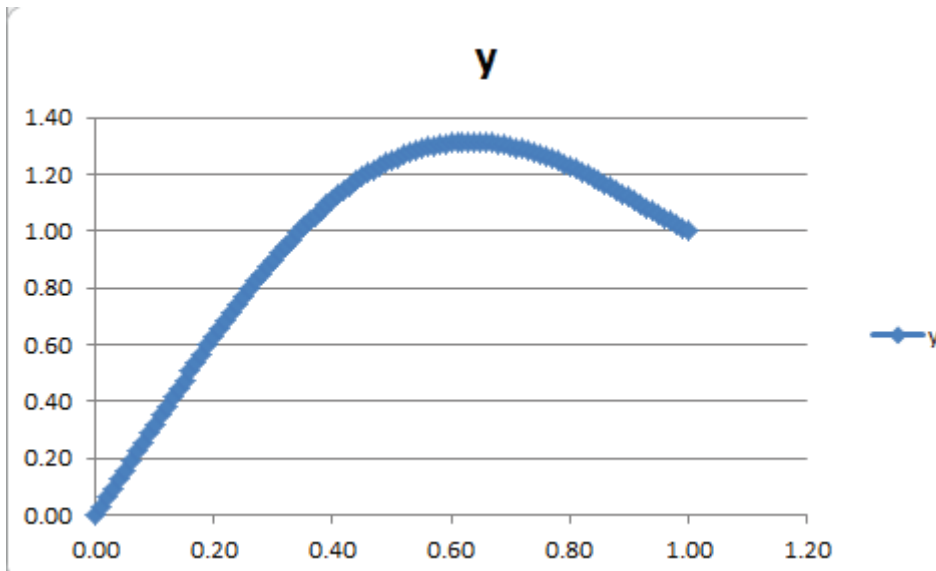


In the next window you can choose to put your data starting at a cell in the existing worksheet or in a whole new worksheet.

Plotting:



Select a simple scatter plot with markers and smooth lines and you get the following plot. (Note I changed the format of the data to be a decimal format with 2 decimal places.)



As there were only two data columns, Excel automatically picked to draw column B vs A. In the next section we'll show you how to create a set of data from a formula and how to pick data to plot.

Plotting a formula

Using the time data from the previous section, let's plot the function $f_1 = \sin(t) + t^2$. To enter a formula into excel, click on a cell and press the equals '=' key. There are many built-in functions for excel, like the $\sin()$ function. The reference A2, refers to the contents of cell A2. You can add references to your formula by typing them or by clicking on the cell or group of cells.

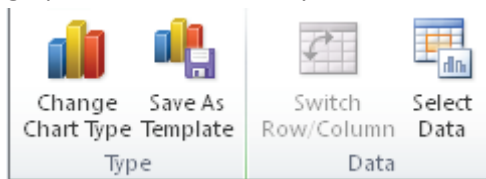
	A	B	C	D	E
1	t	y	f1		
2	0.00	0.00	$\sin(A2)+A2^2$		
3	0.01	0.03			

To create a data set we want to use the same formula but increment downward through the values of t. To do so click on the bottom right corner and drag it down to create the grey box shown below.

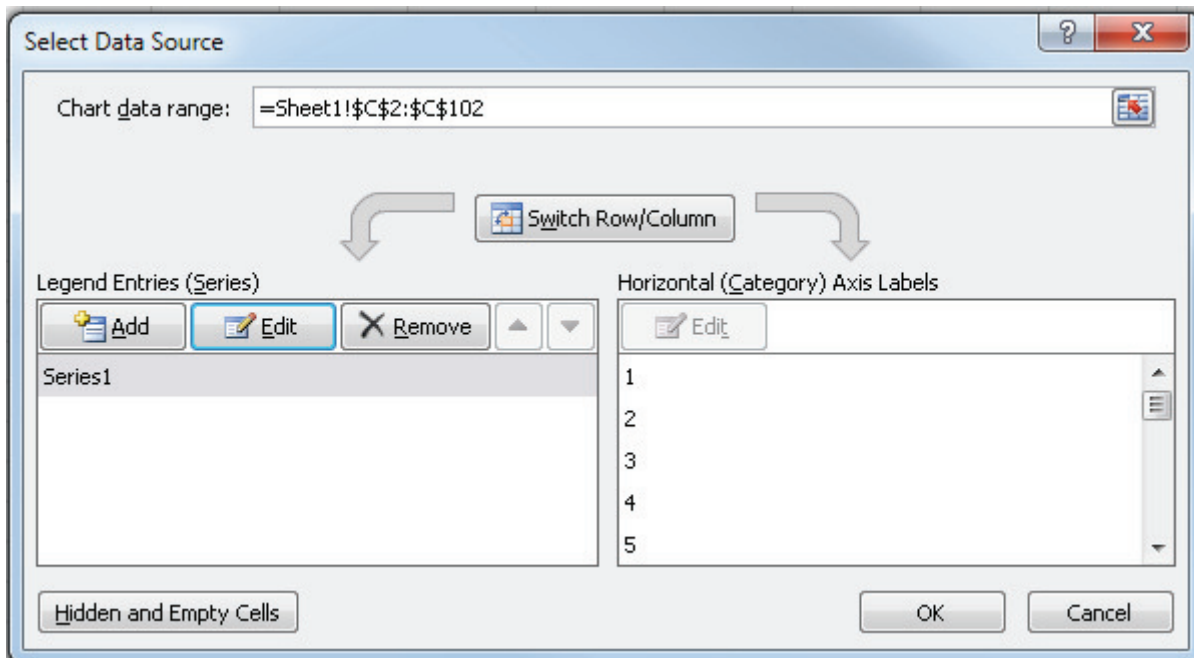
	A	B	C
1	t	y	f1
2	0.00	0.00	0.00
3	0.01	0.03	
4	0.02	0.06	
5	0.03	0.10	
6	0.04	0.13	
7	0.05	0.16	
8	0.06	0.19	
9	0.07	0.22	
10	0.08	0.26	
11	0.09	0.29	
12	0.10	0.32	

Dragging this box will copy the formula down but the reference A2 will be incremented each time.

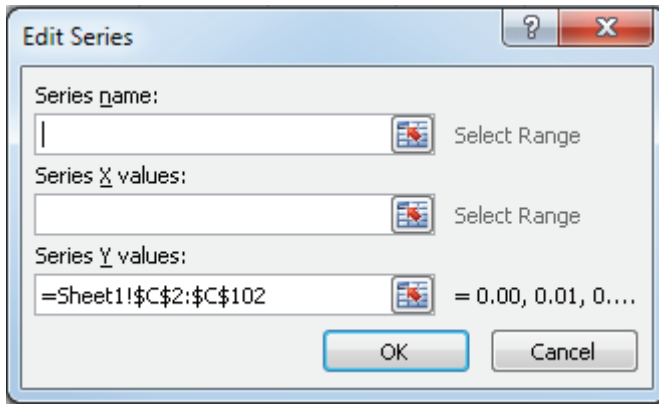
To plot f1 vs t, we click on scatter plot again from the insert tab. Now with more than 2 columns, the graph will be blank until you click on select data at the top.



In the next window, put your y axis data in the chart data range box.



By default, it will give you a default increasing sequence for the x-axis. To generate the x-axis from data in the work sheet, click on the edit button under “Legend Entries”.



Click the right icon, to add the data for t and hit okay and your plot is done. Make sure you add labels, a title and a legend if necessary before you try to pass it off as an engineering figure.

