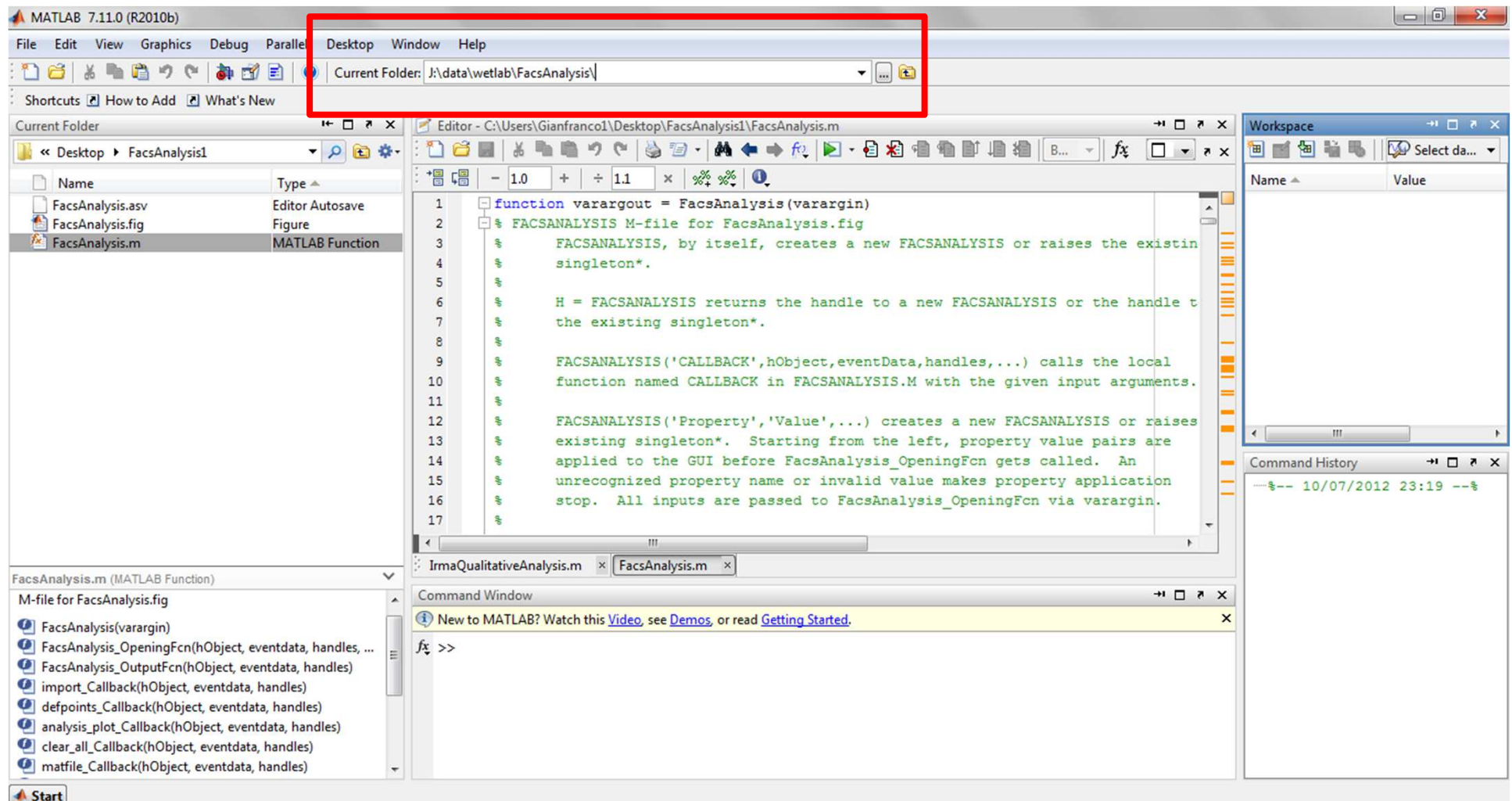


# FacsAnalysis Matlab tool

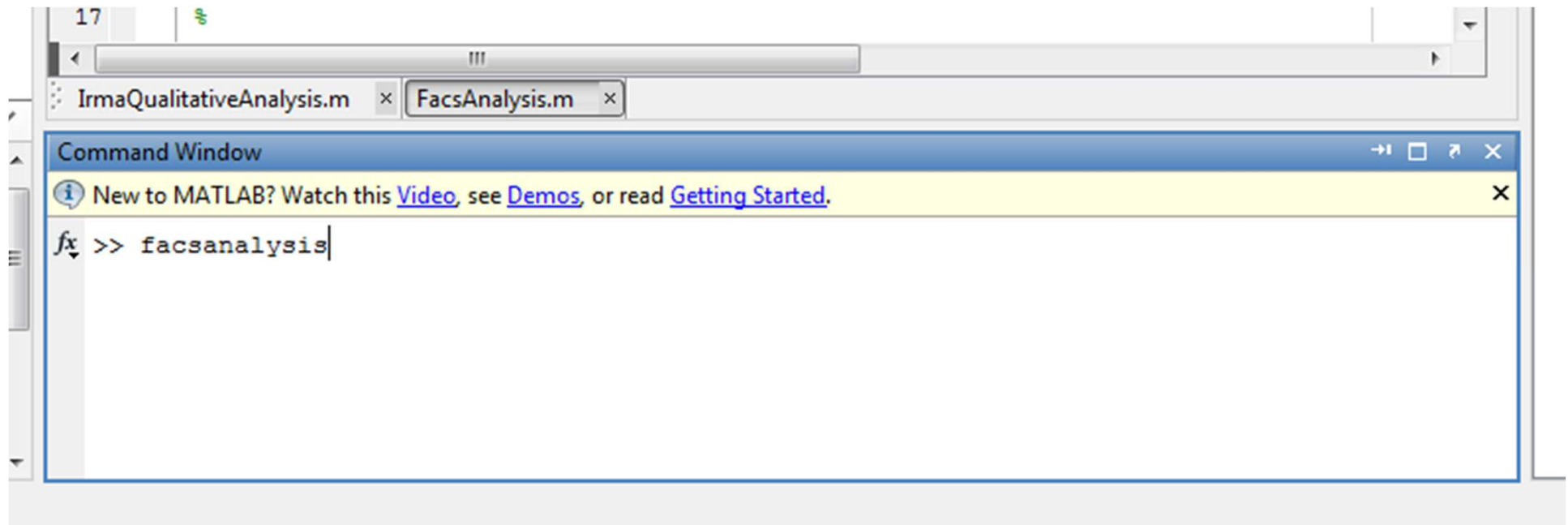
Tutorial

Gianfranco Fiore

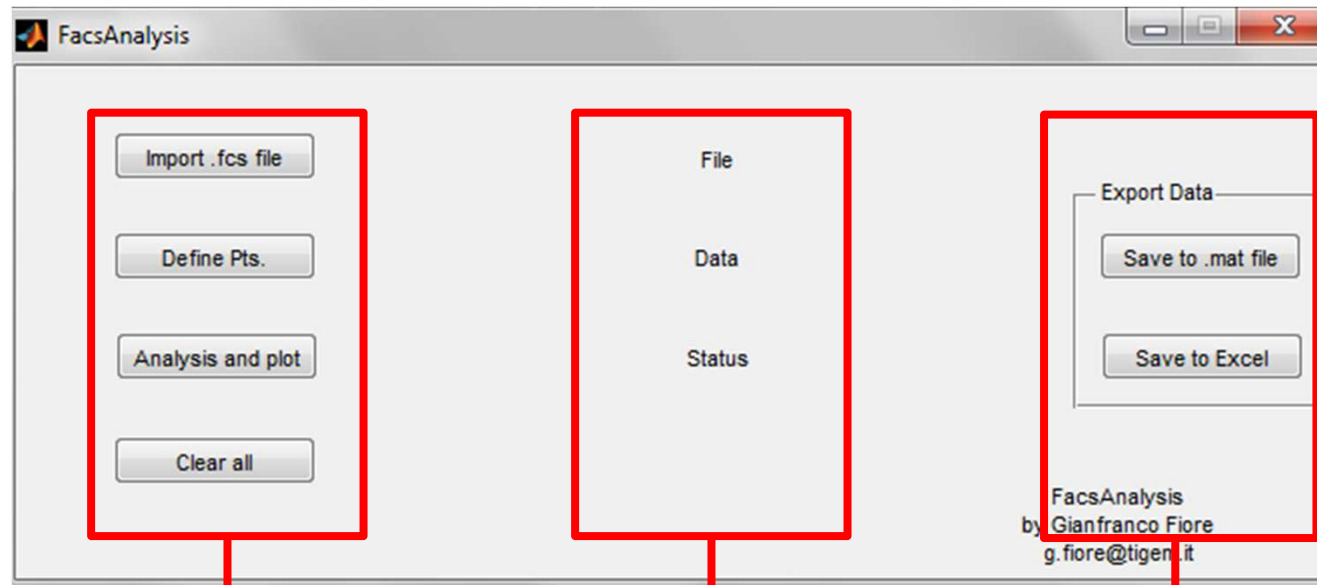
- Launch Matlab by clicking on the icon on your desktop
- Select as current folder the path: “...\data\wetlab\FacsAnalysis\”



Type in the command window : “facsanalysis” and press enter



This interface will appear on your desktop



**Command buttons:**

**Import .fcs file:** allows the user to load a 3.0 facs file

**Define Pts.:** open a mask in which it is possible to indicate the points used to select the cell

**Analysis and plot:** provide histograms plot for the cells fluorescence

**Clear all:** clears all the data loaded and created.

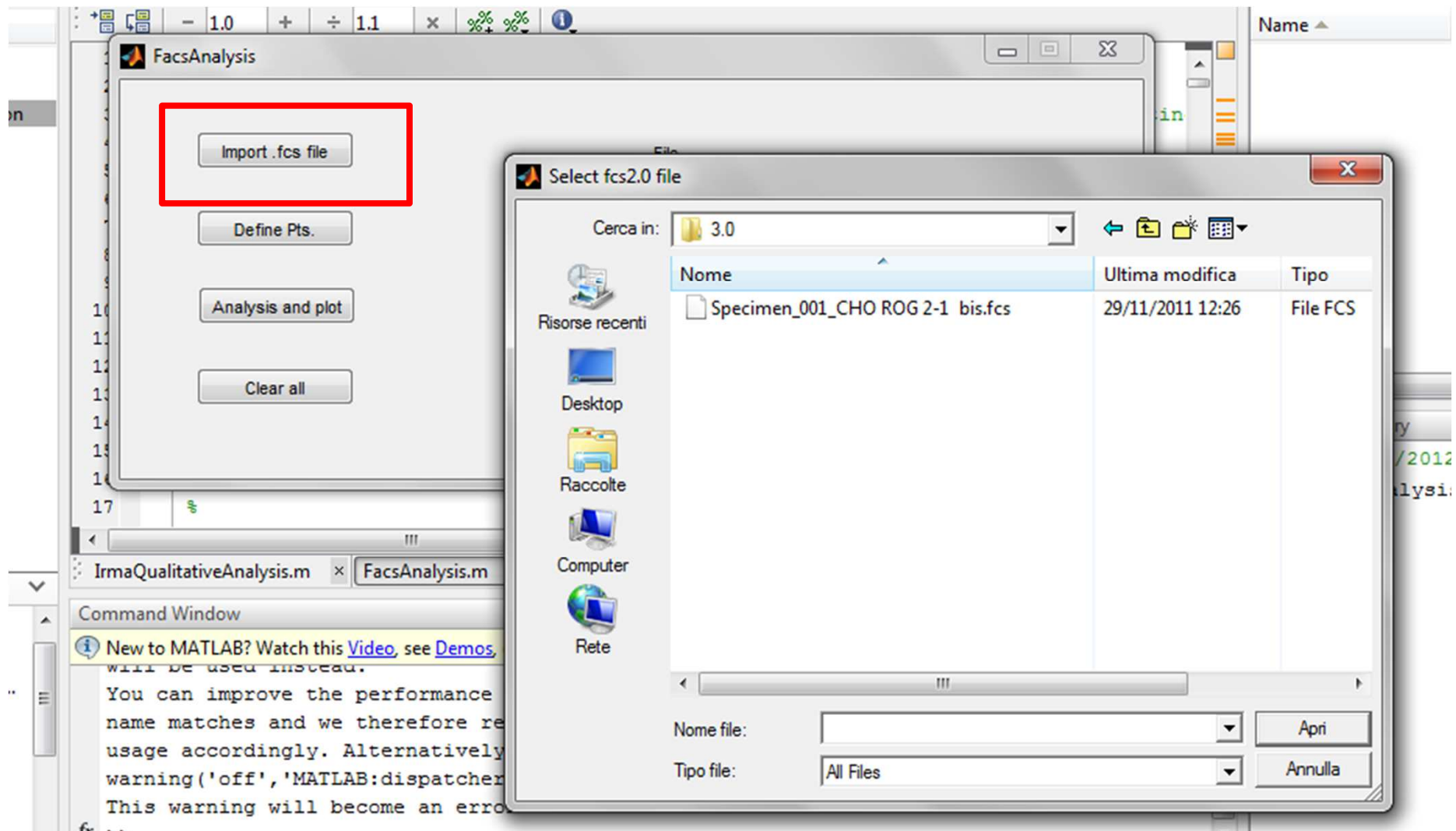
**Message bars:**

Provide useful informations to the user:  
Name of the loaded file, data that are in the file, status of the program

**Export buttons:**

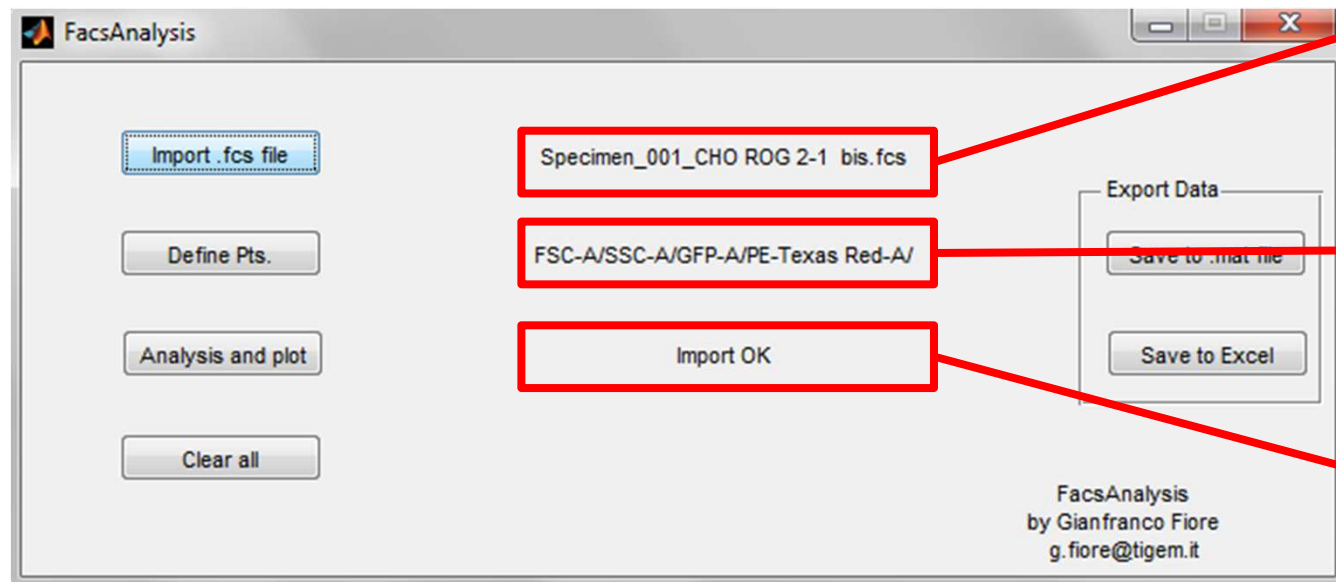
This buttons allow the user to export the dat to matlab and excel formats

## How to load a file



Click on “Import .fcs file”, choose a 3.0 fcs file from the window that will appear and click on Open.

# Result after a file has been loaded

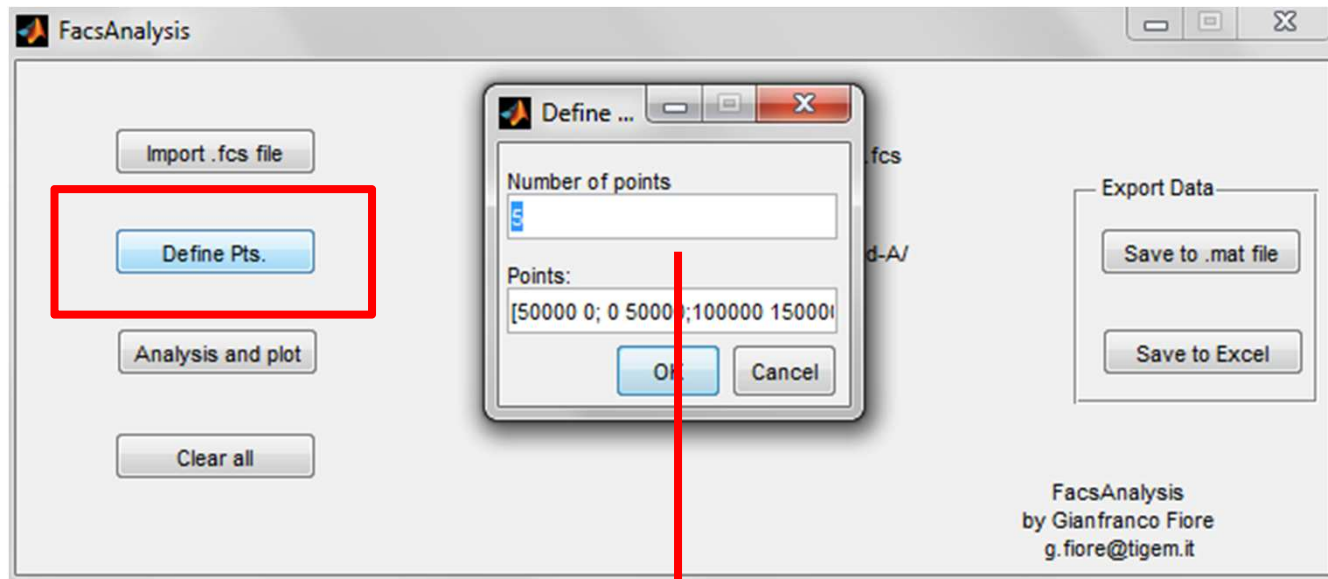


File name

Data loaded

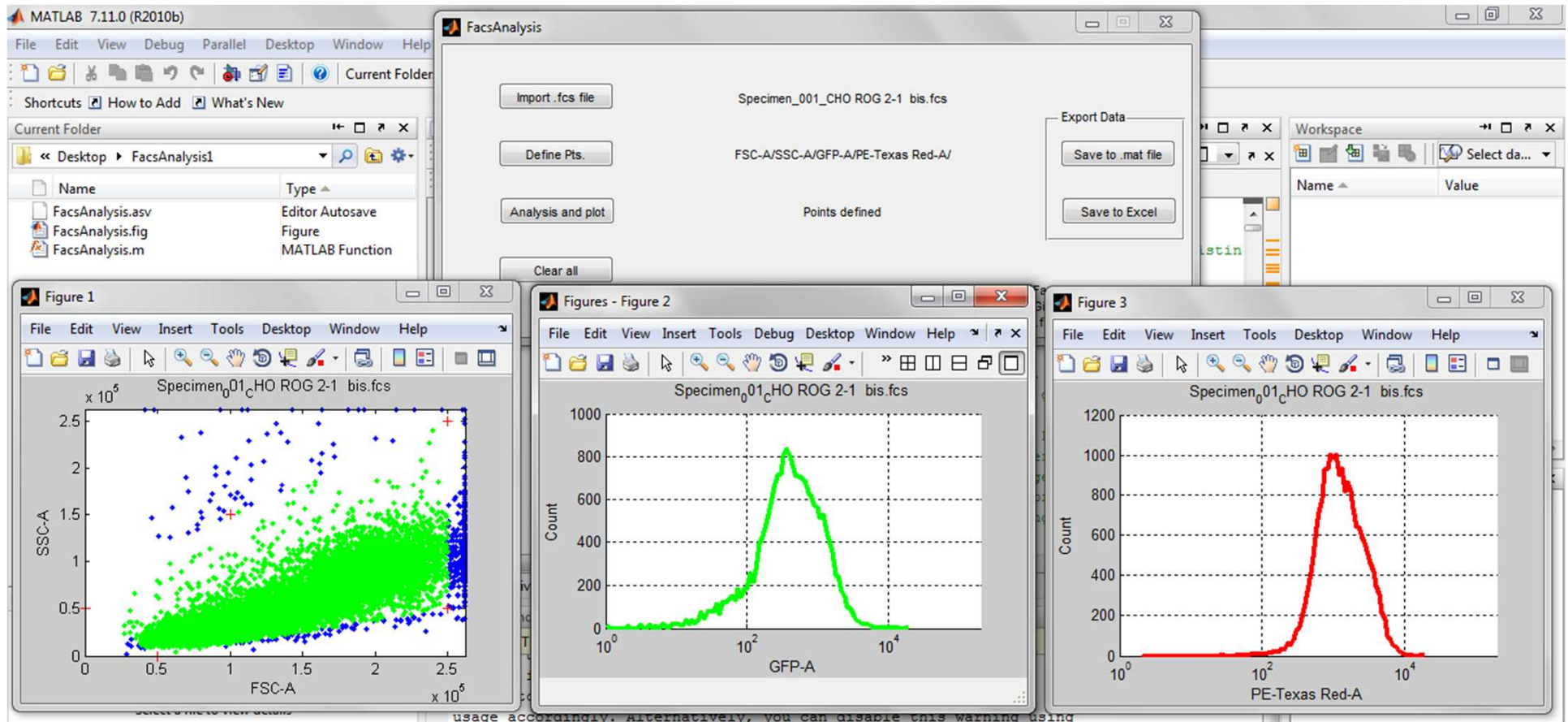
Tool status

## How to define points to select cells



Click on “Define Pts.” , and in the dialog box that will appear provide the number of points and the coordinates of each point by following the format provided for the default values; then click on Ok; in the status bar “Points defined” will appear.

# How to plot data



By clicking on the button “Analysis and plot” three images appear on the desktop: In figure 1, all the cells are represented with respect to morphological parameters (the green dots are the cells selected by providing the points); figure 2 and 3 are the plot of the histograms of fluorescence of the cells



## How to export data

You can export data in two different ways:

- By clicking on “Save to .mat file” button; in this manner you will save your data in a matlab file. When you press this button a dialog box appears in which you should provide the destination folder and the name of the file that you are saving. After you confirm the saving ,in the status bar , “Data saved to .mat file” appears.
- By pressing “Save to Excel” button; the tool will create an .xls file with the same name of the .fcs file loaded, in which the data contained in the fcs file are stored. After this export, in the status bar, “Data saved to Excel format” appears.

To start with a new analysis

To load a new .fcs file and to perform a new analysis, click on the button “Clear all”; all the data are cleared (the files that you have saved won't be deleted), and now you can import a new file and analyze it