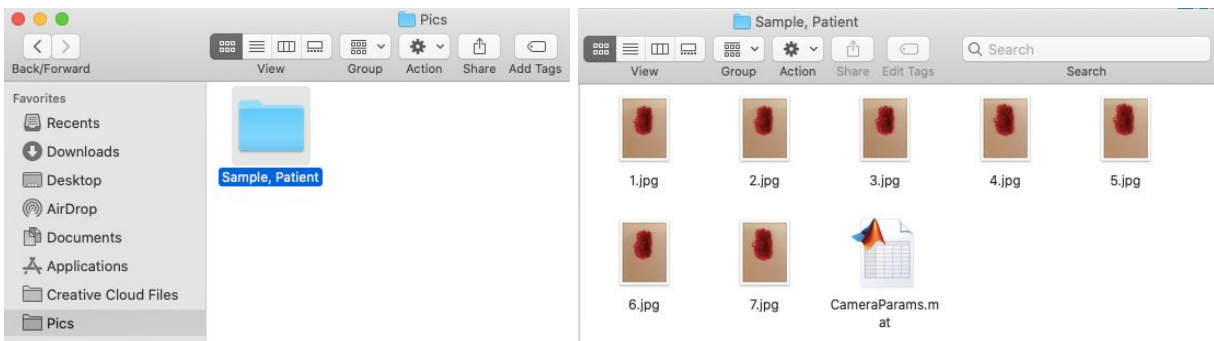


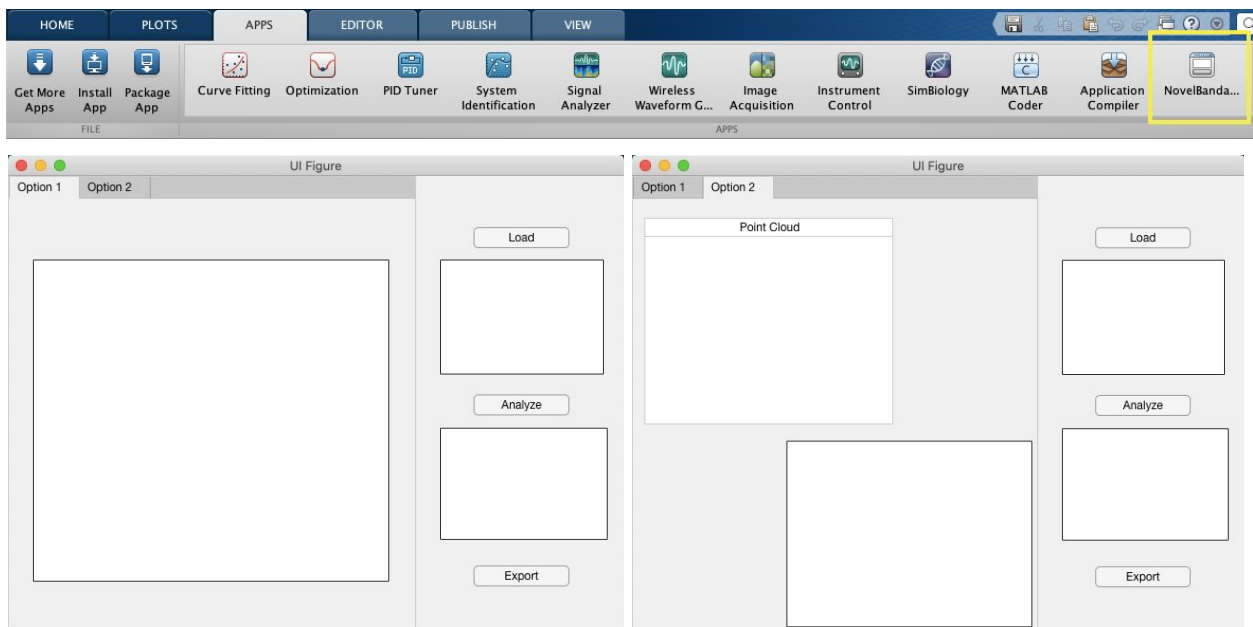
## Software User Manual

**Note:** The software user manual is intended to allow users to successfully operate the software to obtain a schematic for a bandage template that can be executed by a laser cutter.

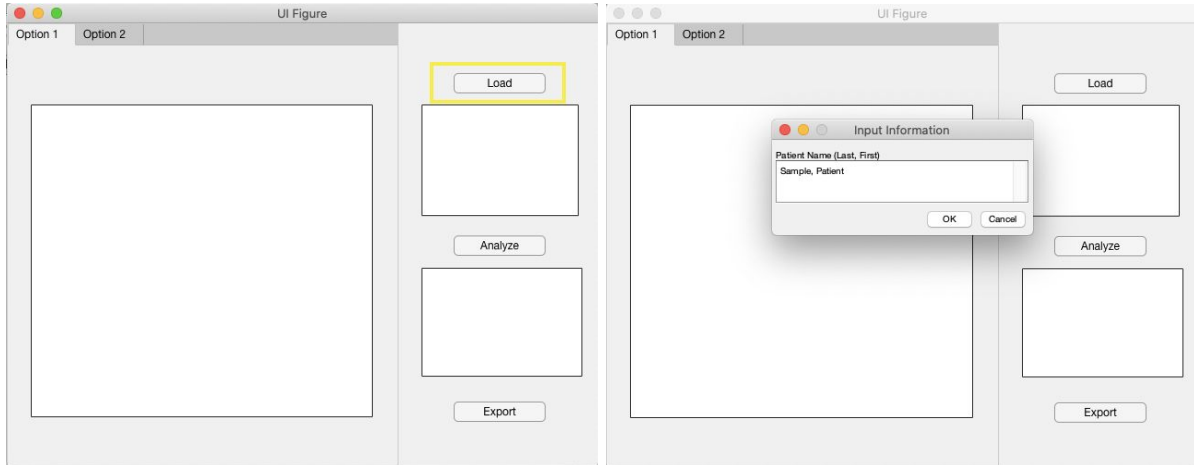
- 1) Take about seven images of the wound from slightly different angles (maximum angular difference of 30 degrees between images). Save all the images in the same file as the camera parameters. Remember the name and location of the folder so that it can be selected later on.
  - a) Fewer images (2+) will work but may not yield the best possible results.



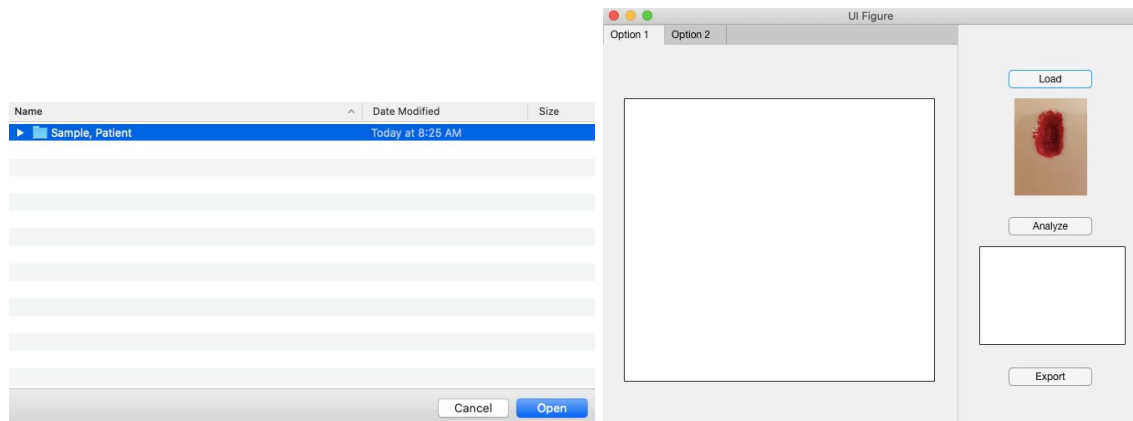
- 2) Open the NovelBandageSystem app through MATLAB. After clicking on the app, the software will open a new window called “UI Figure” with the GUI.
  - a) **Note:** If a standalone desktop app, then open on desktop. The current version of the software is not a standalone desktop app, but future versions may be.



- 3) Load folder containing images for the software to analyze.
  - a) Click the *Load* button in the upper right hand corner of the GUI.
  - b) Window will pop up asking for the patient's name. Enter name in the text box in 'Last name, First name' format. Click OK.

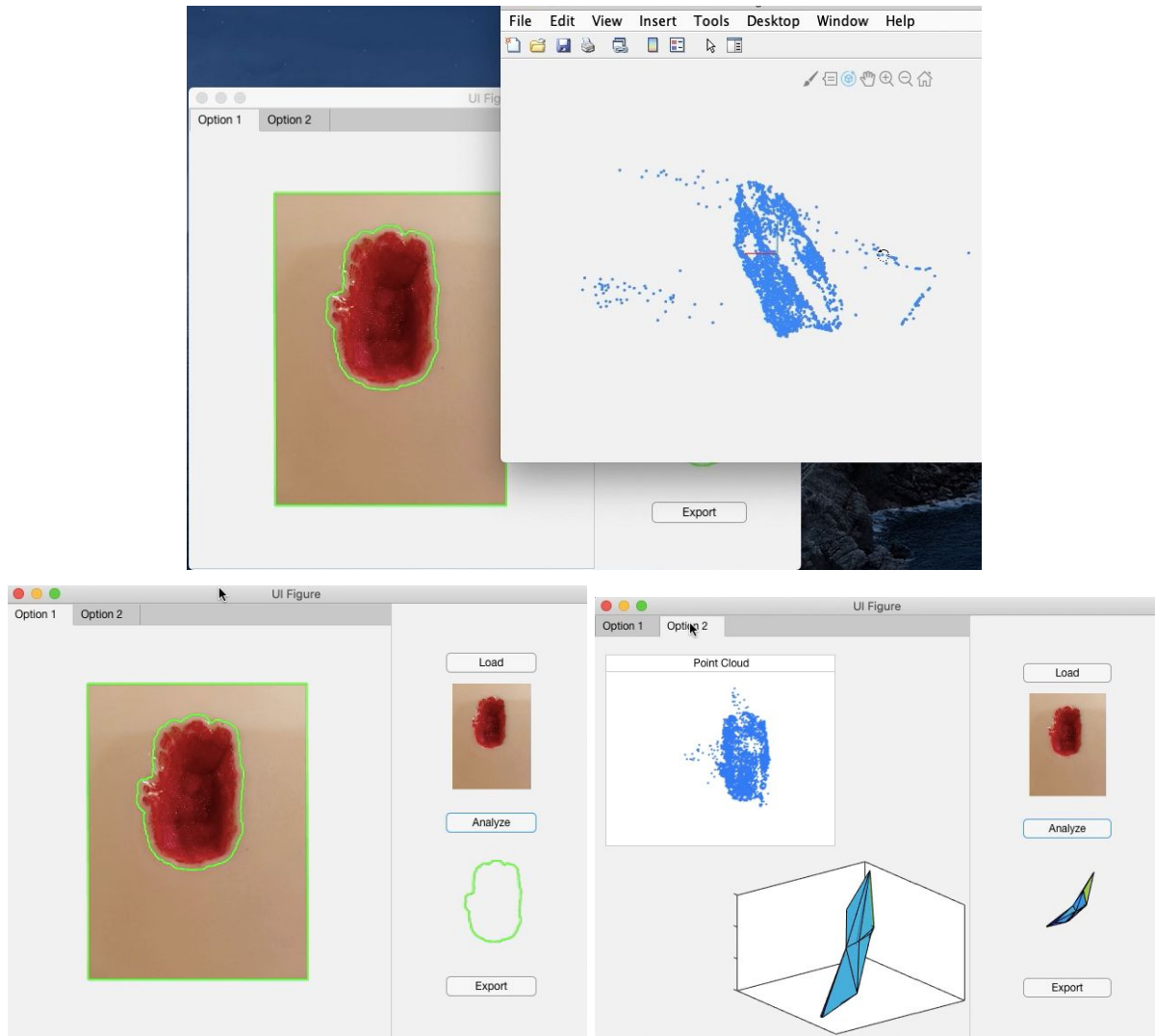


- c) New window will pop up and ask the user to choose a folder to open. Select the folder containing the wound images.
  - i) The first image in the folder will be displayed under the *Load* button.
  - ii) *Note:* If “cancel” or ineligible folder is selected (e.g. folder with no images), then a warning message will appear.



- 4) Select the *Analyze* button to run the analysis algorithms and generate the bandage templates based on the loaded wound images.
  - a) This may take seconds but should not take more than a minute. The results will be automatically displayed in the previously blank boxes.
  - b) Switch between the *option 1* and *option 2* tabs to see the results of both analysis methods: the computation of the boundary of a binary image is option 1, and structure from motion analysis is option 2.

- c) A new figure window containing the point cloud will also appear. The point cloud is also displayed under *option 2*. However, the point cloud in the new window can be interacted with and rotated in order to obtain a better idea of the 3D nature of the point cloud.
- d) The preview of the file that would be exported will be displayed under the *Analyze* button. It adjusts depending on which tab is selected.



- 5) Select the *Export* button to export the selected template, previewed under the *Analyze* button, as a PDF file. Select a location to save the exported file in the computer. The exported template will be saved as a PDF file entitled 'Patient Last Name, Patient First Name bandage template Month-Day-Year Hour-Minute-Second' based on the entered patient name information and the current date and time.

