

INTERFERENCE ANALYZER

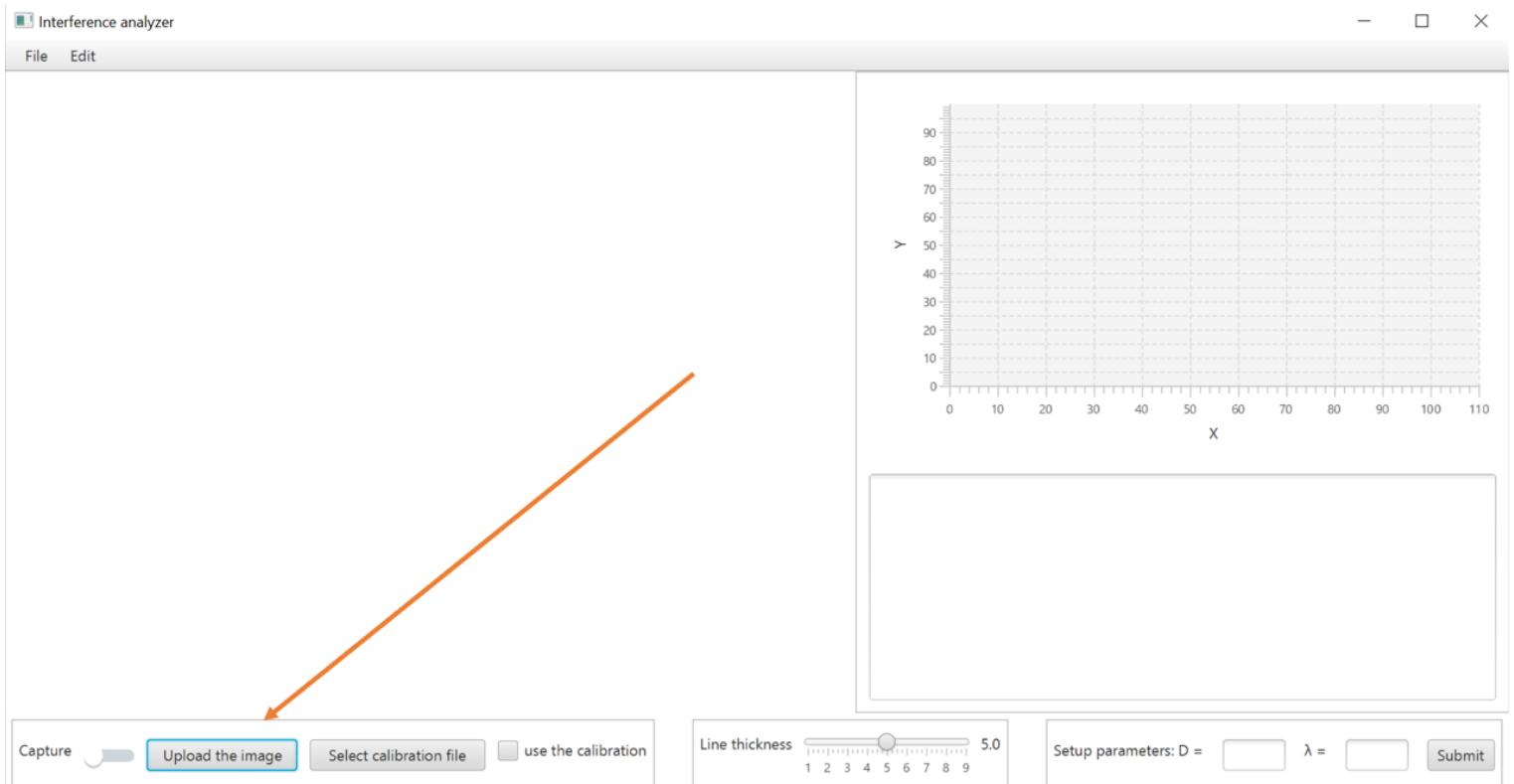
User Manual

This is a program, which will calculate a curve from an interference image.

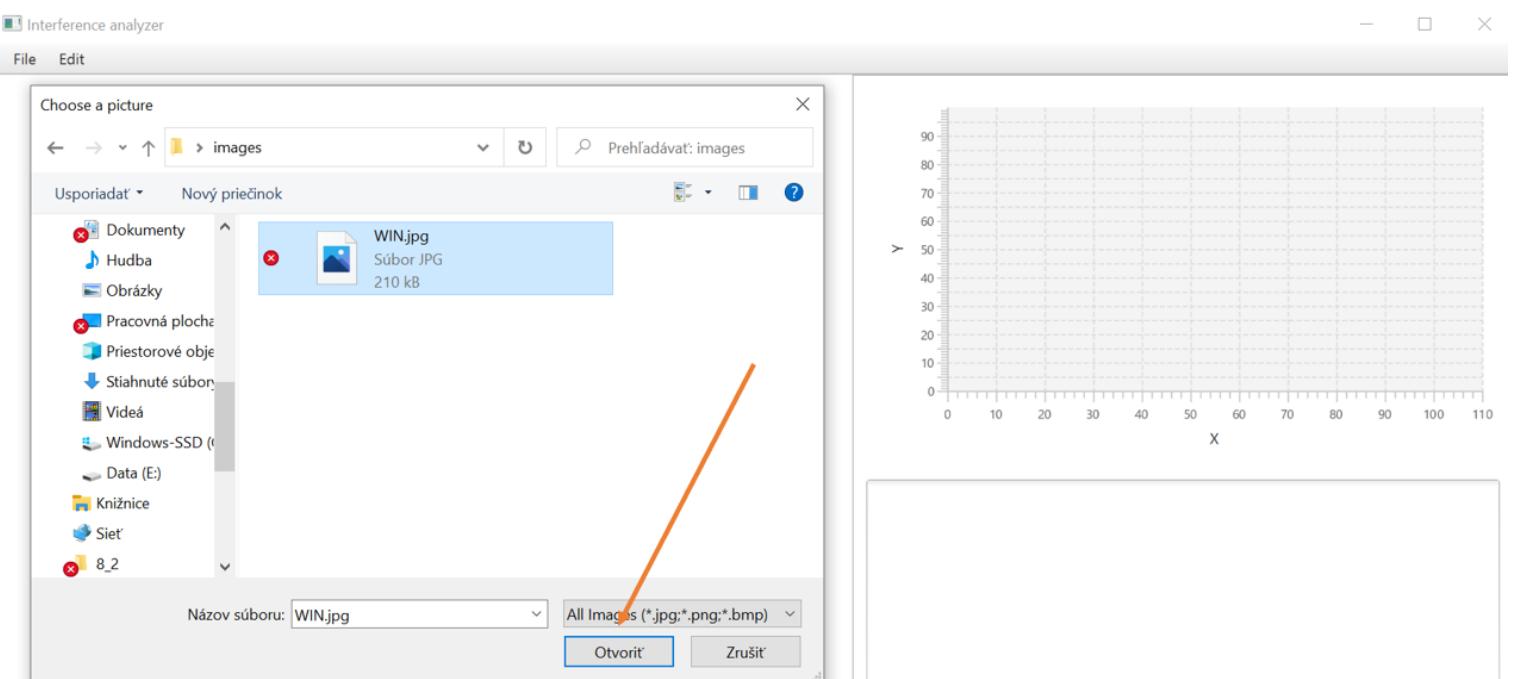
Firstly the user needs to decide if he wants to use an image uploaded from his device or rather use the camera to capture one.

-> user wants to upload an image from the local repository

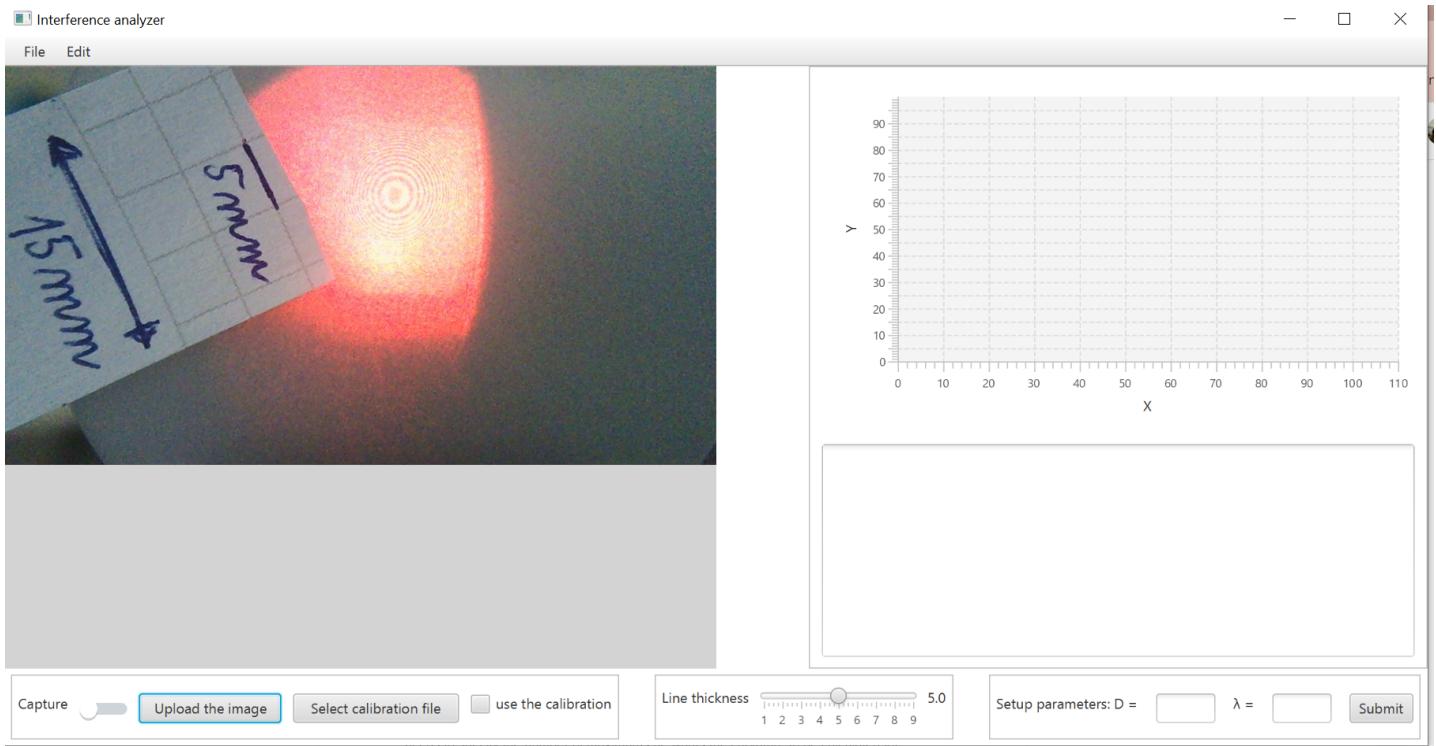
Click the “upload image” button in the left bottom corner of the application.



Select image from file explorer.

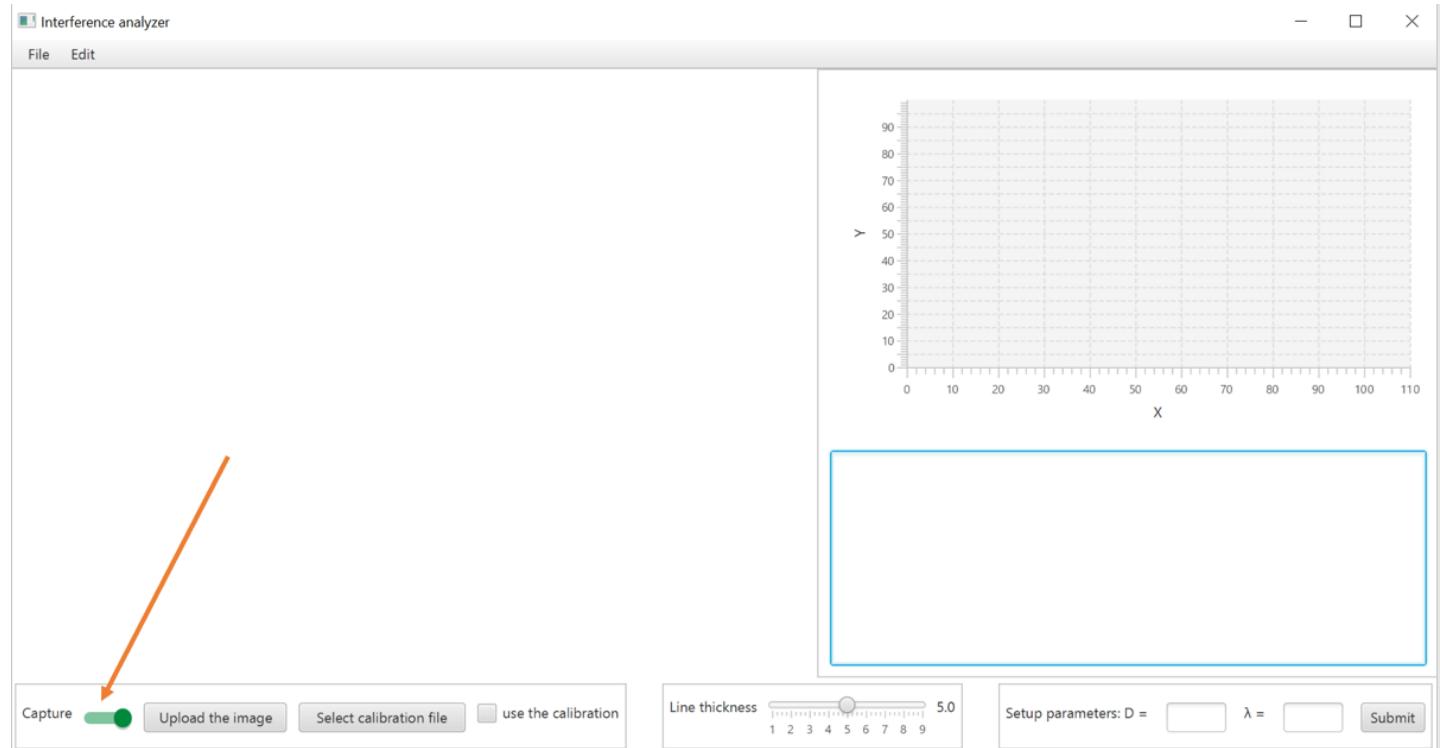


The image will appear on the left part of the application window.

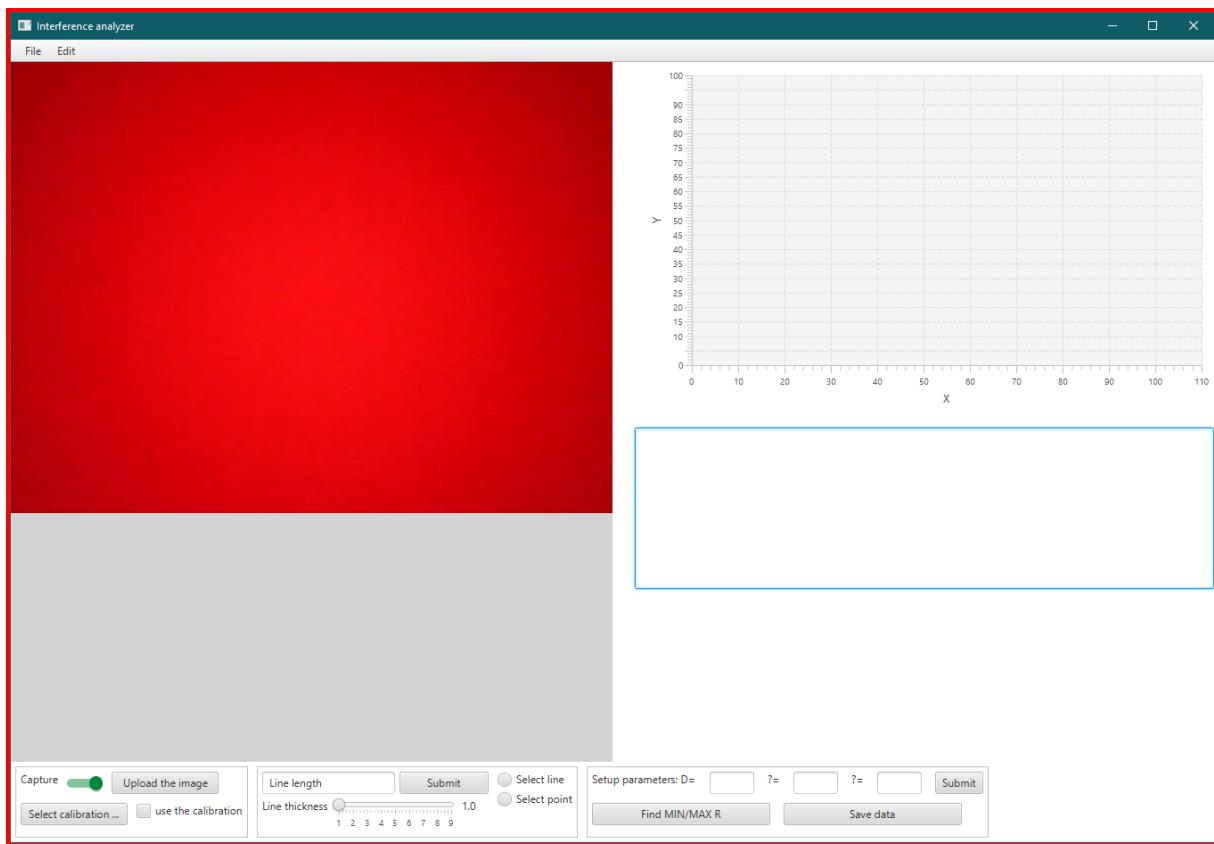


-> user wants to capture an image from the camera

Click the toggle switch labeled “capture” in the left bottom corner of the application.



Live camera footage will appear on the left part of the application.

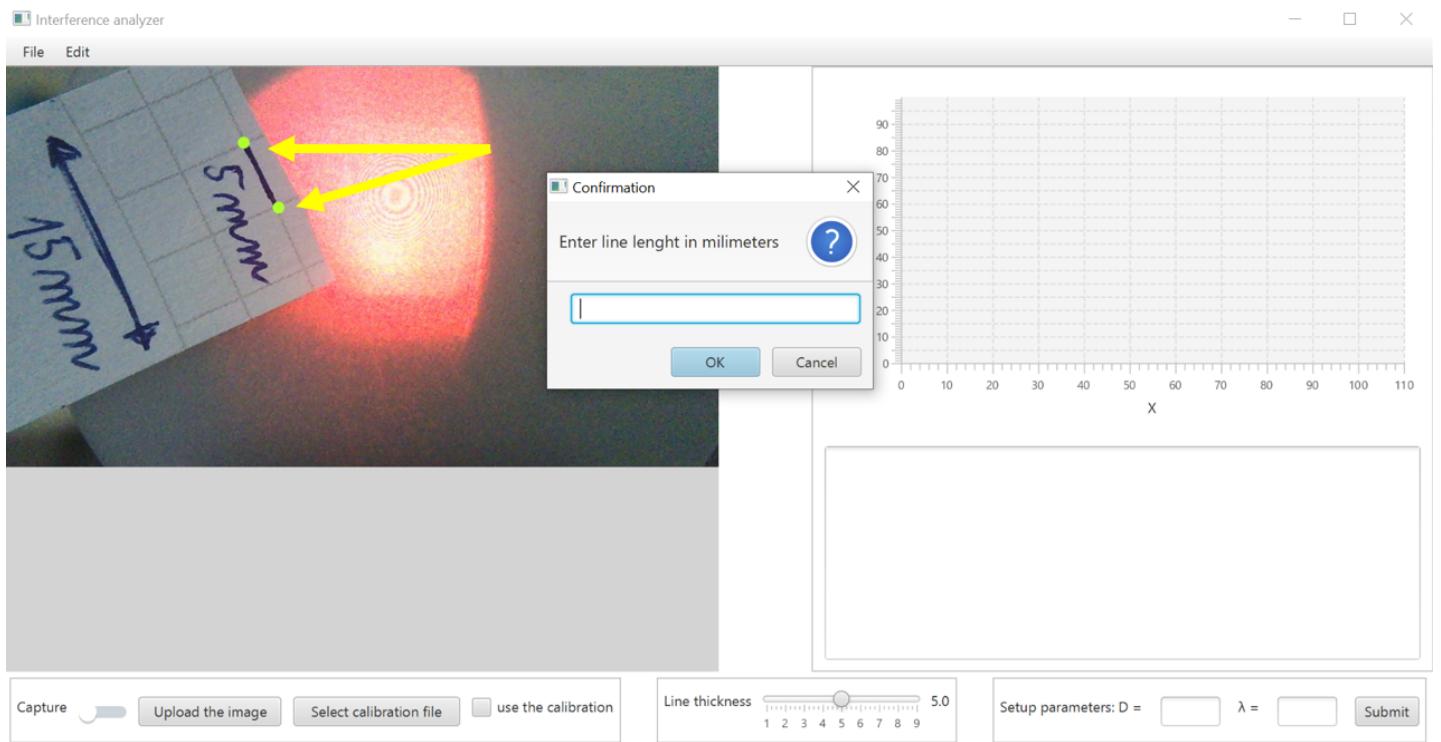


User can capture the static image by switching the toggle off.

-> calculation

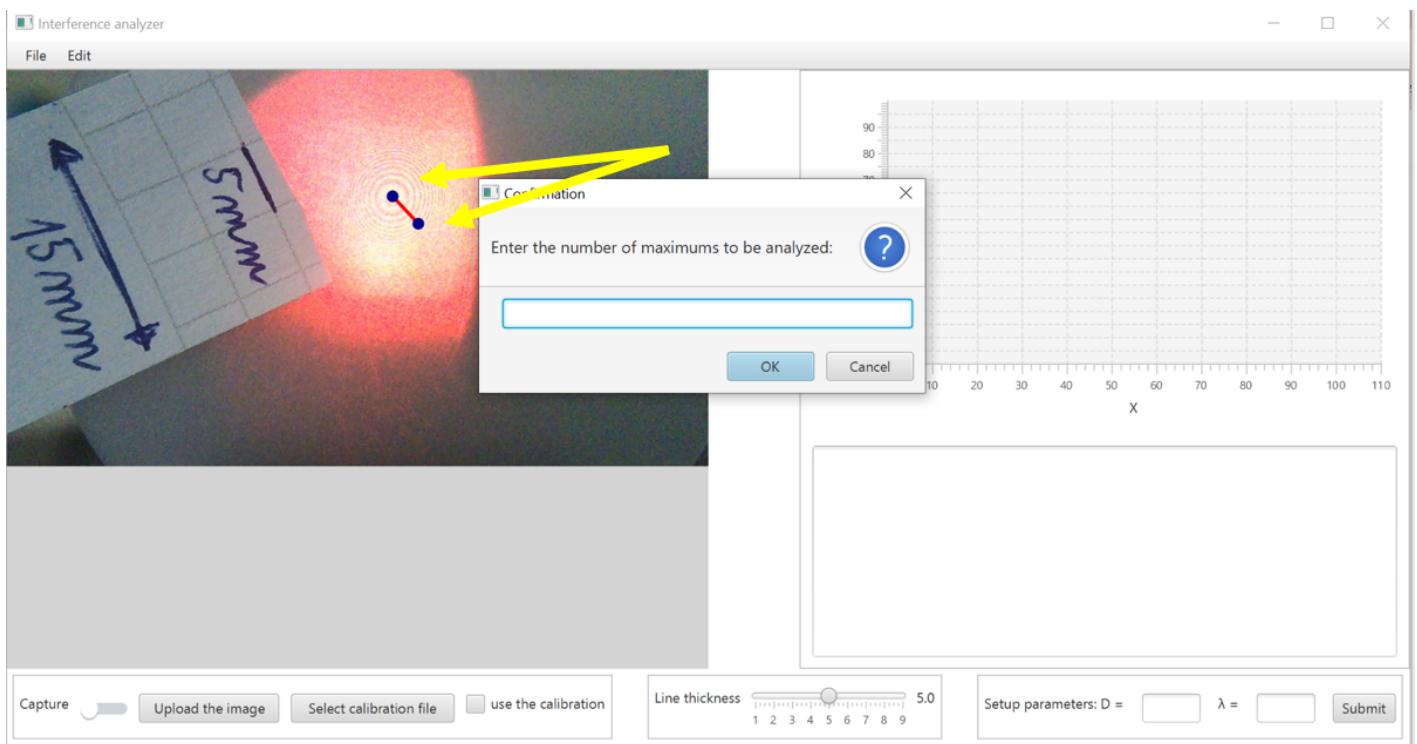
When uploading a new image, a user first needs to specify the length of the line we will use for reference as a scale.

Make the first click on the beginning of this line, a green dot will be shown. Place second click at the end of this line. After second green dot appears, a pop-up window is shown with textbox. Please write length of selected line in millimeters.

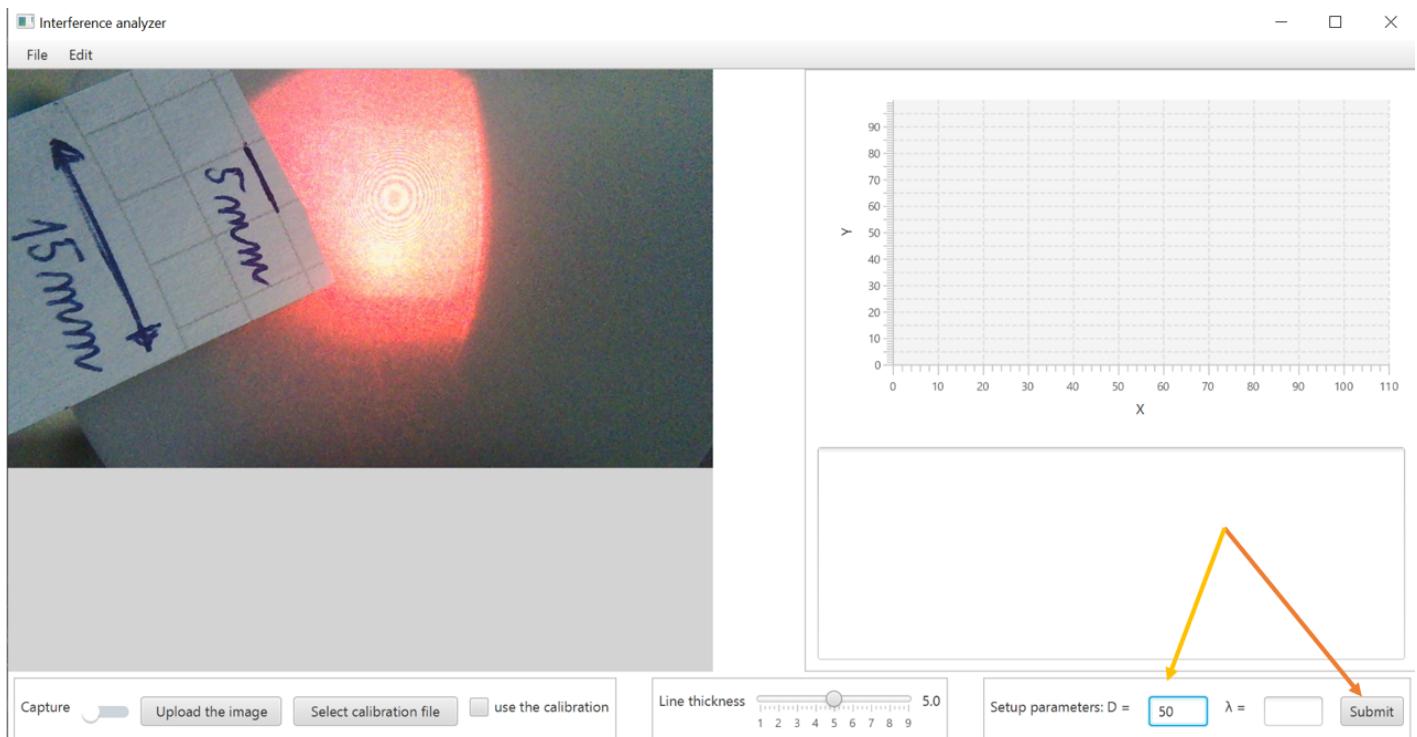


After this, the user will specify the spot where software will start the calculation. Blue dot appears.

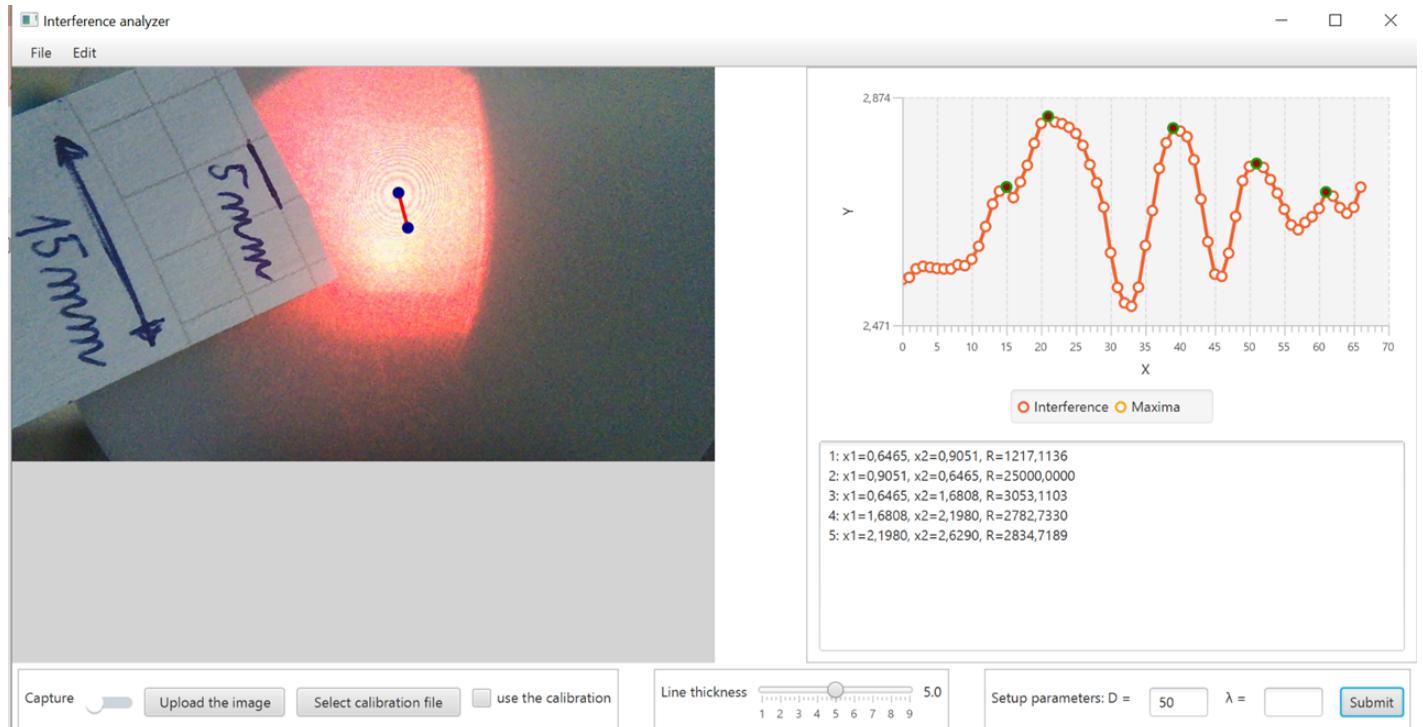
Second click on the image is the spot where calculation will end. Another blue dot appears and also the red line is shown between these two dots. Small pop-up window appears, user needs to specify the number of maximums he wants the curvature to be calculated for.



First calculation won't be correct until the user specifies the D parameter in right bottom part of the application. Press the "Submit" button after input.

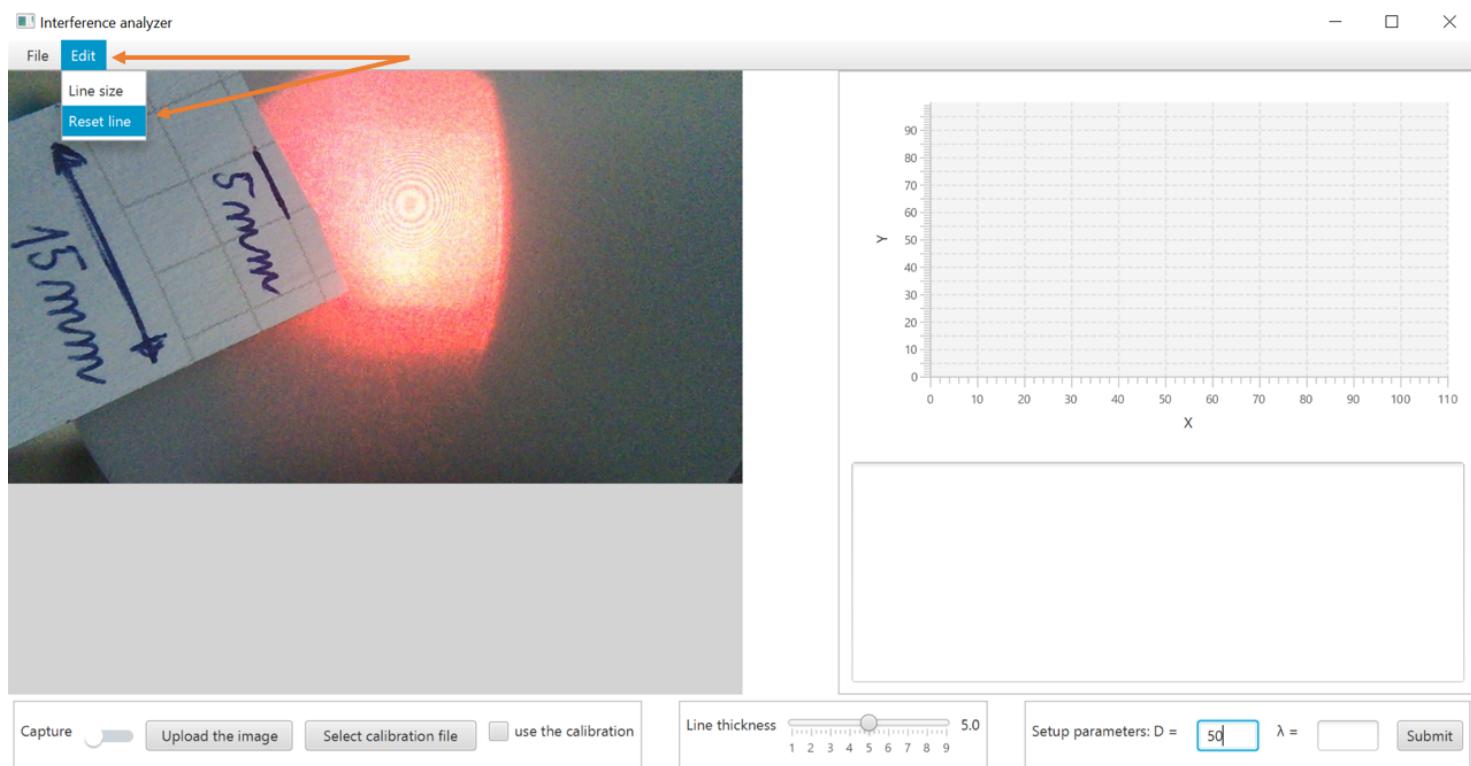


The graph for a selected line is shown in the top right part of the application window.



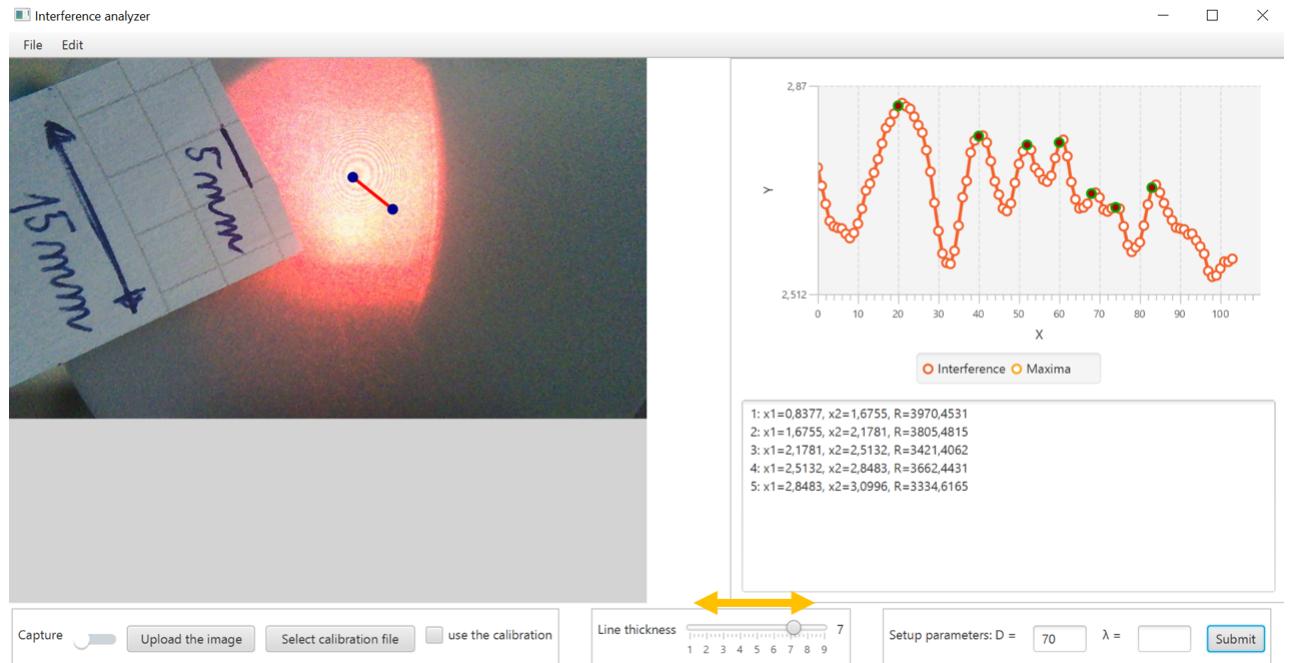
With every new click on the image user changes the second dot (end of the red line) and inputs the number of maximums he wants to calculate for.

If the user needs to change the whole line, click Edit in the top left corner and select the "reset line" option.



After doing it, the blank image will be shown so the user can select two new spots used for calculations again.

For more accurate calculations user can move the slider in the middle bottom box. To the left for less accurate, to the right for more accurate calculation.



This is best seen on the graph, a user gets the smoothest graph when the slider is moved to the right.

For closing the application please click on the "X" button in the top right corner.

