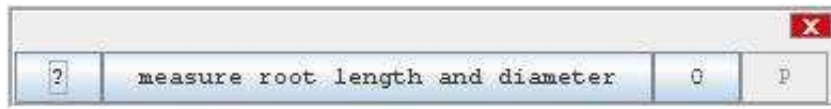


Operation: measure root length and diameter



Author:

Volker Bäcker

Example

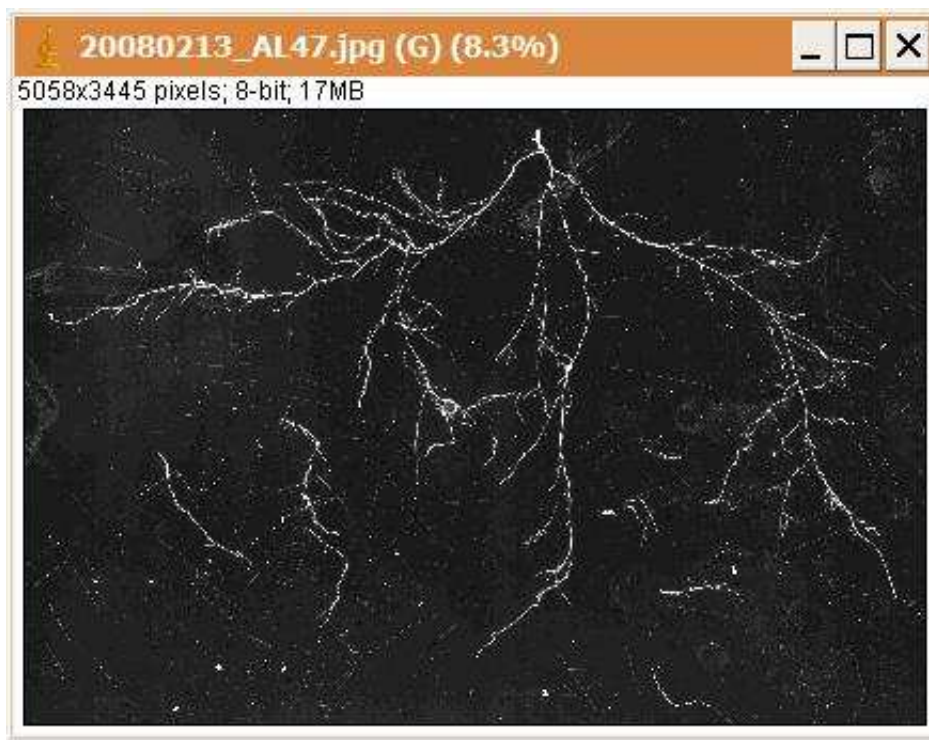


image	number of objects	length	mean thickness	folder
20080213_AL47.jpg	1	63281,01		5,05.Z:\baecker\muller\marie\

Description

The application measures the total length and the average thickness of filament like structures.

When the application is started the list-editor is opened. Press the add button and select the files you want to measure. Press close on the list editor to start. You will be asked where to save the result spreadsheet file. The image is opened and displayed. You might eventually need to inverse the contrast, so that high pixel values are bright. You can do this by activating the image and pressing SHIFT+i. Open the contrast-adjuster (SHIFT-t) and adjust the contrast. Press apply on the threshold-adjuster. You can now

clean up the image by making selections and using the fill or clear command from the menu Edit. When you finished cleaning up, press the continue button.

Options

To change options either press the O-button of the application or open the application (right click on the top of the application tile and select open from the context menu) and press the O-button of one operation of the application.

Option	Value / Control
image list	edit
use sequence opener	<input type="checkbox"/>
replace string	
replace with	null
min size	500
max size	999999999
display labels	<input type="checkbox"/>
exclude edge objects	<input type="checkbox"/>
invert y	<input type="checkbox"/>
limit to threshold	<input type="checkbox"/>
measure area	<input type="checkbox"/>
measure bounds	<input type="checkbox"/>
measure center of mass	<input type="checkbox"/>
measure centroids	<input type="checkbox"/>
measure circularity	<input type="checkbox"/>
Feret's diameter	<input type="checkbox"/>
measure fit ellipse	<input type="checkbox"/>
integrated density	<input type="checkbox"/>
measure mean	<input type="checkbox"/>
measure min & max	<input type="checkbox"/>
modal gray value	<input type="checkbox"/>
measure perimeter	<input type="checkbox"/>
standard deviation	<input type="checkbox"/>
max joint radius	20 [0.0;-]
output path	ickerBureau\repc browse
output folder	control browse
create in source folder	<input checked="" type="checkbox"/>
name addition	
add loop index to name	<input type="checkbox"/>

Important options are the min size and max size of the find objects operation. The min size should be smaller than the smallest object you want to keep. The max size must be bigger than the size of the biggest object you want to keep. Another important option is the max joint radius of the measure mean diameter operation. Set it to a value, so that branching areas are completely ignored for the calculation of the thickness.

Results

A control image showing the skeleton is saved in the subfolder control. Length and thickness will be written to a spreadsheet file. The length is calculated using the measure skeleton length operation.