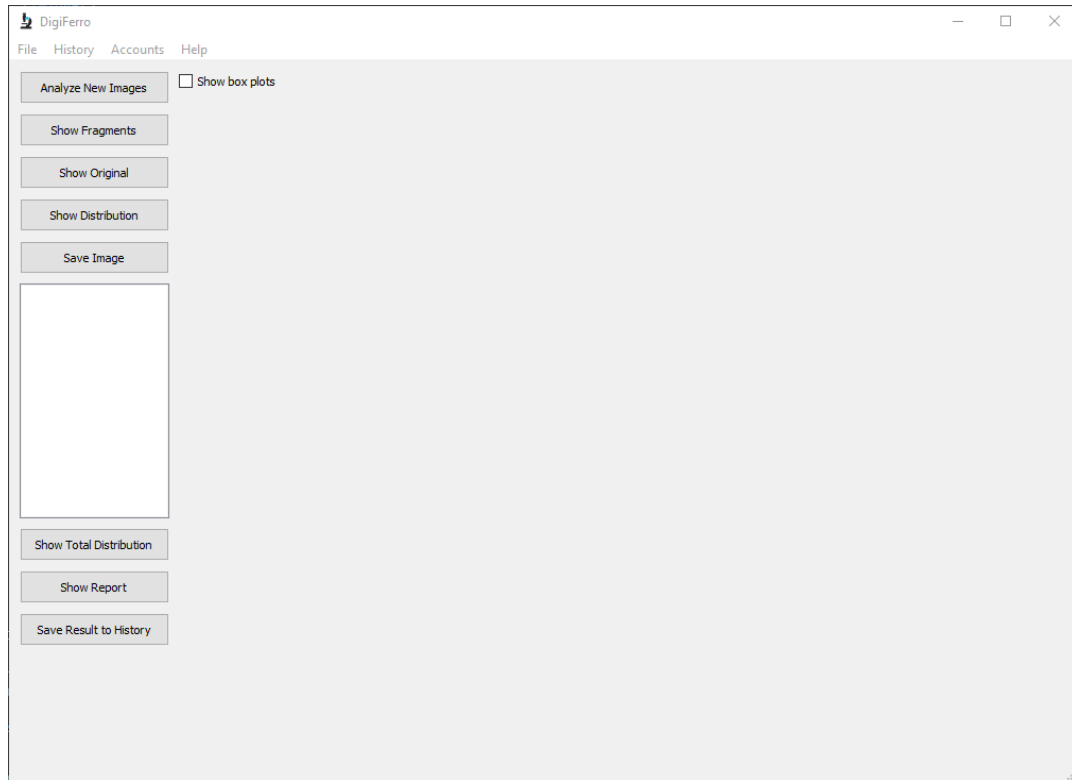


# DigiFerro Guide

Main Program Window:



Button Overview:

- Analyze New Images – Open a window to type in all details regarding a ferrography sample and to choose the microscope images
- Show Fragments – Display the fragment mask, white shapes are for spalling, gray for rubbing
- Show Original – Display the original image
- Show Distribution – Display the fragment distribution according to the defined size categories
- Save Image – Save the currently displayed image to file
- Show Total Distribution – Display the overall fragment distribution in the marked images
- Show Report – Creates and opens a PDF report about the sample's info and result.
- Save Result to History – Add the result to overall ferrography history tracker.
- Show box plots – Displays bounding box indicator for spalling fragments above 75 microns

Menu items:

- History – options to import an existing history file (as an excel file) and to view the overall ferrography history.
- Accounts – User management options, from password change to adding of new users (restricted to admins)
- Help – Help information (this guide) and About dialog box.

## Open File Window

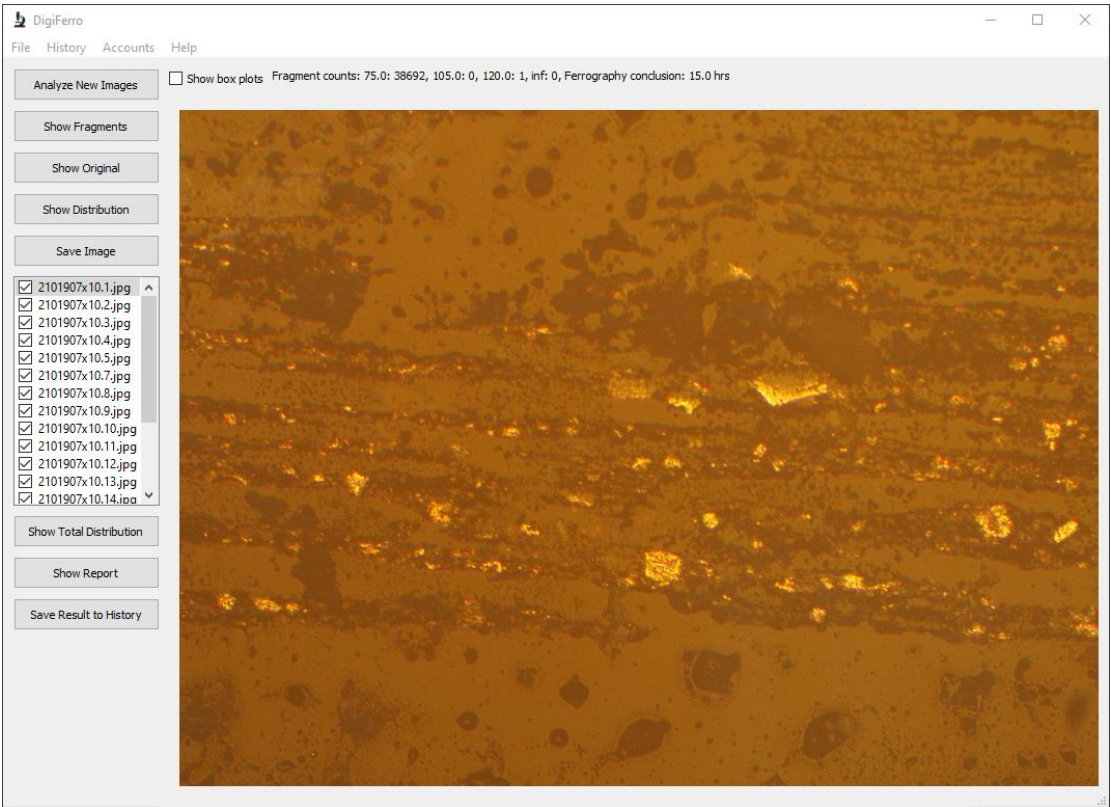
The 'Open File' window contains the following fields and controls:

- Squadron:** Text box with value '100'
- Sample Number:** Text box with value '070620220001'
- Hangar:** Text box with value '2'
- Sample Date:** Date picker showing '07/06/2022' with a 'Show Calendar' button.
- Tail Number:** Text box with value '118'
- Part Number:** Text box with value 'AC'
- Time since overhaul:** Spin box with value '123.00' and a unit label 'Hours'.
- Spectroscopy section:**
  - Iron:** Text box with value '24' and unit 'PPM'.
  - Titanium:** Text box with value '55' and unit 'PPM'.
  - Other metals:** Dropdown menu with 'Below Limit' selected.
- Images section:**
  - A large white rectangular area for image display.
  - An 'Add Images' button to the right of the rectangle.
- Scale:** Spin box with value '2' and unit 'pixels/ $\mu$ m'.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

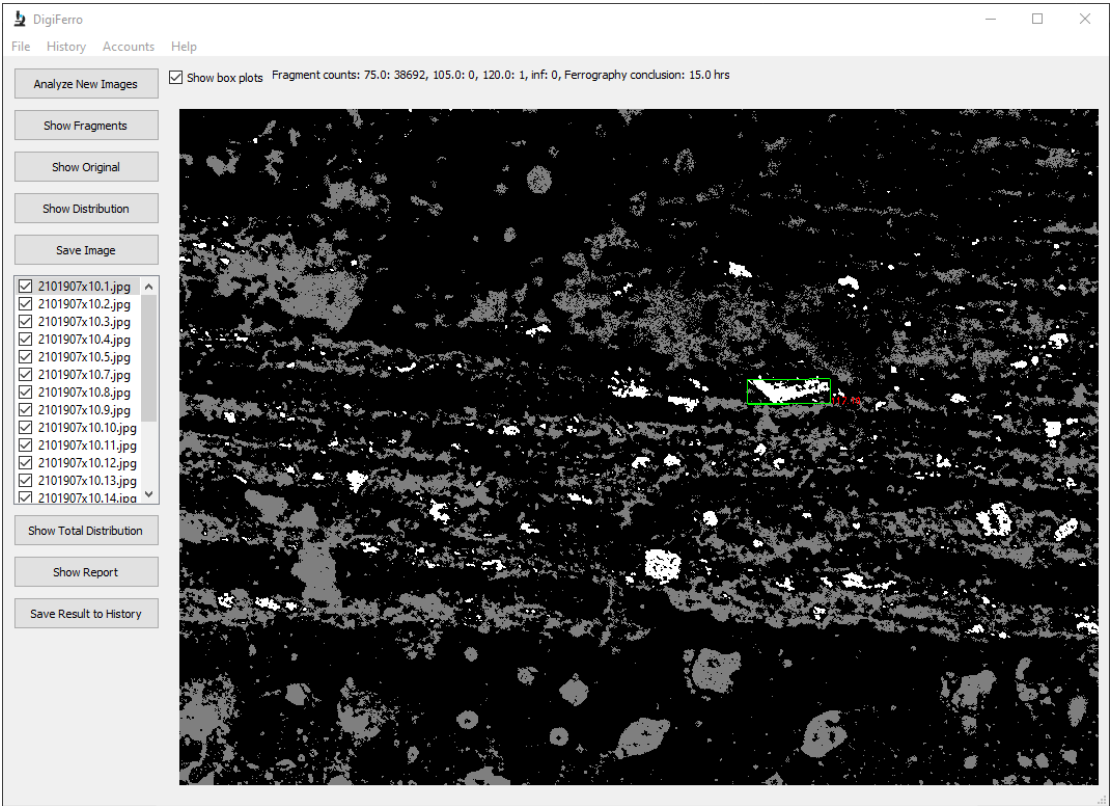
This window is used to specify all the relevant information.

Images can be either be browsed via 'Add Images' or be dragged to the white rectangle.

Example of after choosing images:



Original Image



Fragment mask and additional information

## History Window

History

Part Number:

Sample History for Part Number:

	Date	Sample ID	Sample Date	Time since overhaul	Tail Number	Spectrometric Result	Analysis Result	Conclusion
1	2016-12-13	1612907	None	2616:0	N		27.5	
2	2017-01-15	1701915	None	2964:0	N		27.5	
3	2017-01-24	1701924	None	3241:12	N		27.5	
4	2017-03-15	1703904	None	3556:48	N		27.5	
5	2017-04-18	1704913	None	3937:12	N		15	
6	2017-05-08	1704924	None	4201:12	N		15	
7	2017-06-15	1706911	None	4855:12	N		27.5	
8	2017-08-14	1708903	None	5404:48	N		27.5	
9	2017-10-15	1710901	None	5640:0	T		27.5	
10	2017-11-27	1711016	None	258:15	T		27.5	

Shows sorted history of each part monitored.

Button overview:

- Show History – Displays the selected history of the selected part in combo box.
- Export history – Exports the displayed table into an excel spreadsheet.
- Create Report – Displays a PDF report about the selected sample. (Same format as the one in the Main Window's 'Show Report' button)
- Edit – opens a window to edit the selected sample.
- Remove – removes the selected entry from the part's history.

## Edit Entry

History

Part Number:

Sample History for Part Number:

	Date	Sample ID	Sample Date	Time since overhaul	Tail Number	Spectrometric Result	Analysis Result	Conclusion
1	2016-12-13	1612907	None	2616:0	N		27.5	
2	2017-01-15	1701915	None	2964:0	N		27.5	
3	2017-01-24	1701924	None	3241:12	N		27.5	
4	2017-03-15	1703904	None	3556:48	N		27.5	
5	2017-04-18	1704913	None	3937:12	N		15	
6	2017-05-08	1704924	None	4201:12	N		15	
7	2017-06-15	1706911	None	4855:12	N		27.5	
8	2017-08-14	1708903	None	5404:48	N		27.5	
9	2017-10-15	1710901	None	5640:0	T		27.5	
10	2017-11-27	1711016	None	258:15	T		27.5	

**Edit Entry**

Sample ID: 1612907

Date:

Sample Date:

Tail Number:

Part Number:

Time since overhaul:  Hours

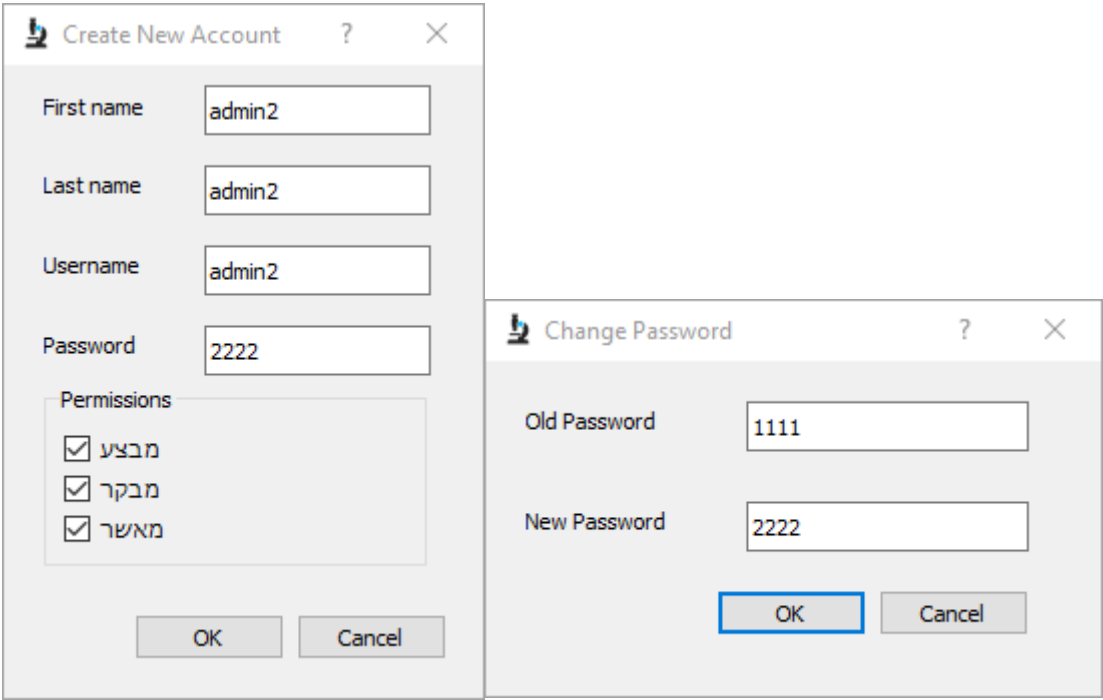
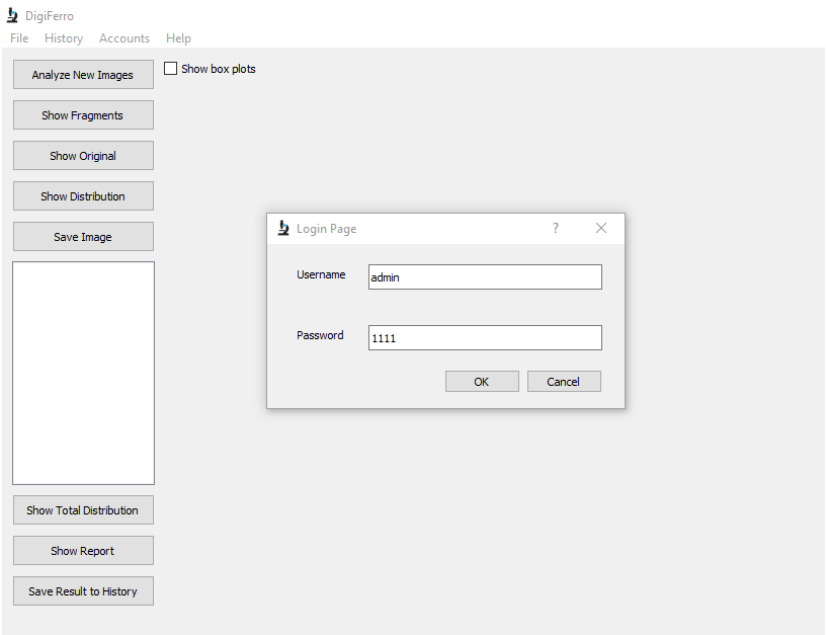
Spectrometric Result:

Analysis Result:

Conclusion:

User management

Login dialog example:



User creation (restricted to admins)

Password change

User management window (restricted to admins):

Dialog

	First name	Last name	UserName	Password
1	Dima	Fishman	Dima	123456
2	Elizabeth	Riska	Eliz	123456
3	Chen	chef	Chen	123456
4	Admin	Admin	admin	2222

Remove

Close