Preliminary Operation

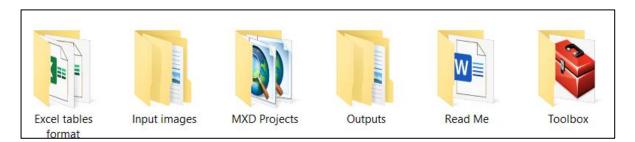
 Copy the directory "Micro-Fabric Analyzer" on a preferred location on your hard drive and be sure to have administration permission (complete control) on it. To do this, right-click on the directory and click Properties > Security and check the permission allowed to the user.

Versioni prec		Persona			
Generale	Condivisio	one	5	Sicurezza	
Nome oggetto: D:\l	Petromatic Analys	t Tools			
Ut <u>e</u> nti e gruppi:					
🚨 Authenticated Us	sers				
SYSTEM					
Administrators (L	APTOP-EPMHSH	18A\Admini	strators)		
🚨 Users (LAPTOP	EPMHSH8A\Use	rs)			
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Per cambiare le autor scegliere Modifica.	rizzazioni		N	lodi <u>f</u> ica	
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2. Copy the Micro-Fabric Analyzer toolbox into the ArcGIS toolboxes directory (usually in C:\Program Files (x86)\ArcGIS\Desktop10.x\ArcToolbox\Toolboxes"

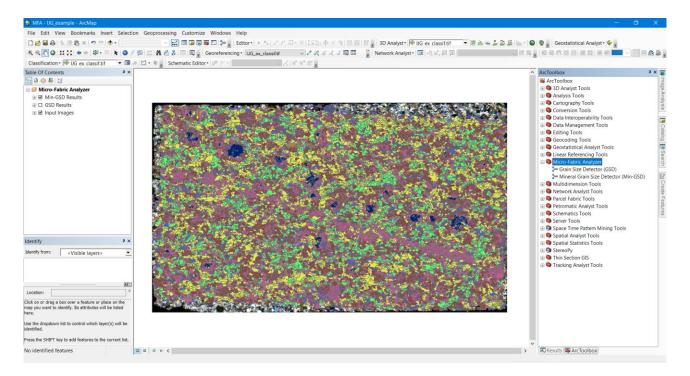


3. Use the Micro-Fabric Analyzer subfolders to store your data.



- Excel tables format: it contains preformatted tables to store data obtained by the GSD and Min-GSD tools;
- Input Images: it contains example images to be used for executing the different tools;
- MXD Projects: the directory used to save the ArcGIS .mxd projects;
- Outputs: the directory used to store both temporary and final outputs of the GSD and Min-GSD tools;
- **Toolbox**: it contains the Micro-Fabric Analyzer toolbox.

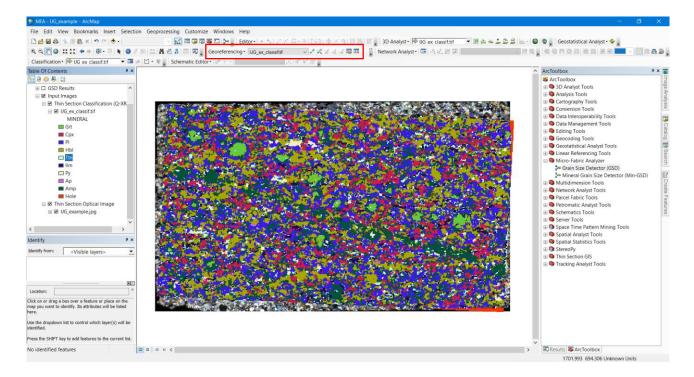
4. Opening the Micro-Fabric Analyzer by right-click of the mouse (add toolbox) into the ArcToolbox panel of ArcGIS:



5. Use the Grain Size Detector (GSD) as the first tool, to derive the map of polygons representing the thin section grains. Use the help menu of the tools to know the toolbox requests.

掉 Grain Size Detector (GSD)			- 🗆 X	
Input Image	_	^	Grain Size Detector (GSD)	^
Sample	- 0		Geoprocessor used to ouline boundaries between different objects from a high resolution thin section scan or a micrograph. If always to screate more of performer advised	
Output Location			micrograph. It allows to create maps of polygon objects representing grains with associated a derived database of all the fabric parameters.	
Spectral Detail [120] (optional)	15.5			
Spatial Detail [120] (optional)	16			
Minimum Segment Size In Pixels (optional)	200			
	32			
<	>	\sim		~
	OK Cancel Environments << Hide Hel	р	Tool Help	

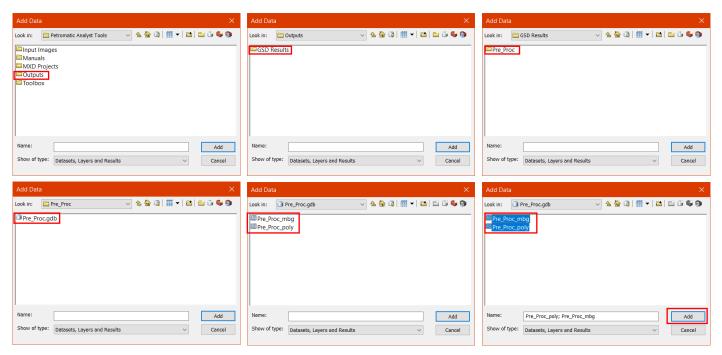
6. As second step of the procedure, you should georeferenced the classification map of minerals obtained through the Q-XRMA, on the thin section optical image:



7. Finally, use the Mineral Grain Size Detector (Min-GSD) to associate the name of the mineral to each digitized polygon:

🕶 Mineral Grain Size Detector (Min-GSD)		- 🗆 ×	
	^	- -	^
OK Cancel Environments << Hide Help	~	Tool Help	~

8. Load the obtained outputs into the ArcGIS project from the created output geodatabase:



- 9. Display the desired Grain Shape factor calculated choosing from those available:
 - Orientation (0-180°); Width (μm); Length (μm); Area (μm²); Aspect Ratio; Equivalent Diameter (μm); Perimeter (μm); Roundness; Shape Factor 1; Shape Factor 2.

