



Modular Algorithm for Optical Monitoring Data(MAFOMD)

Select Single Hardware

 Optical Tomography

 Meltpool Monitoring

 High Resolution Camera

Select Multiple Method

 Data Visualization

 Supervised Learning

 Unsupervised Learning

 Report Generation

 3D Viewer

 Next

MAFOMD | OT

Import Img

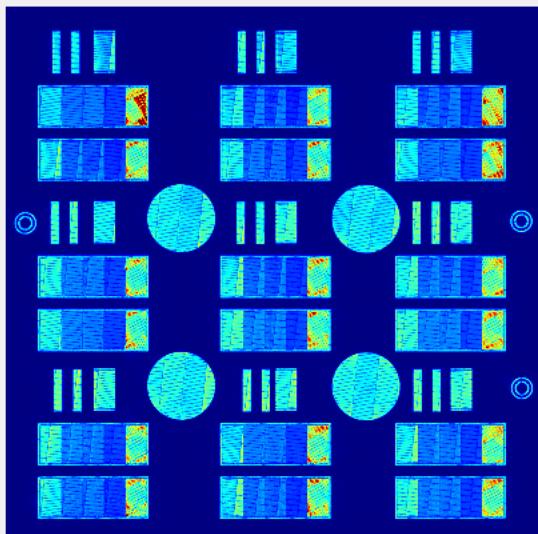
 INT MAX

Upload

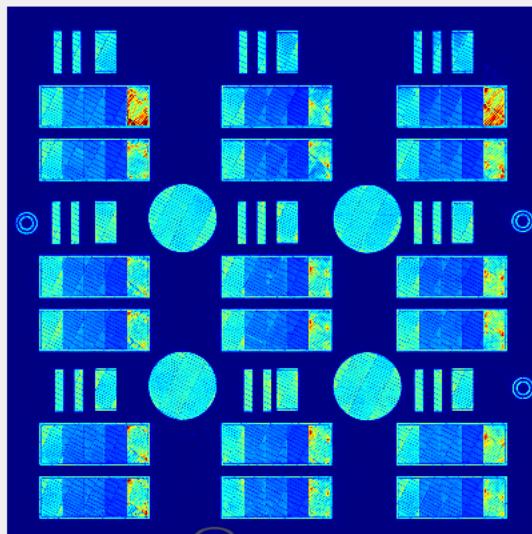
Image Folder:

C:\hotspot MAX imageset

Preview



First Image



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Unsupervised Methods

Location and Visualization of Defects by
PCA,Kmean,ColorspaceTemplateMatching

Input the Parameters

Explained accuracy

0.90

Save image: C:\New folder (3)

Component number 2 System Ref.

Layer for segment

2

Template matching threshold

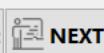
0.95

 Do PCA

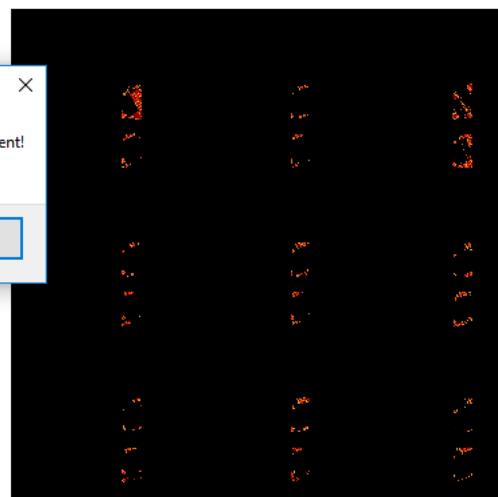
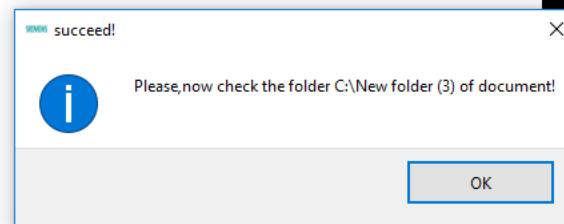
 Do KMean

 Do Template Matching

 3D Viewer

 Default  NEXT

['C:\\\\New folder (3)\\\\-lay-0-output-7.jpg', 'C:\\\\New folder (3)\\\\-lay-1-output-3.jpg']



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Unsupervised Methods

Location and Visualization of Defects by
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Save image: C:\New folder (3)

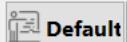
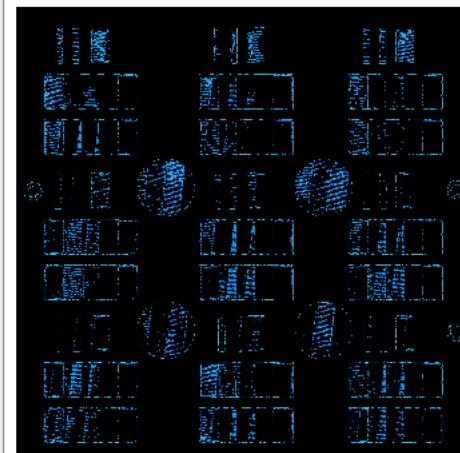
Component number 2 System Ref.

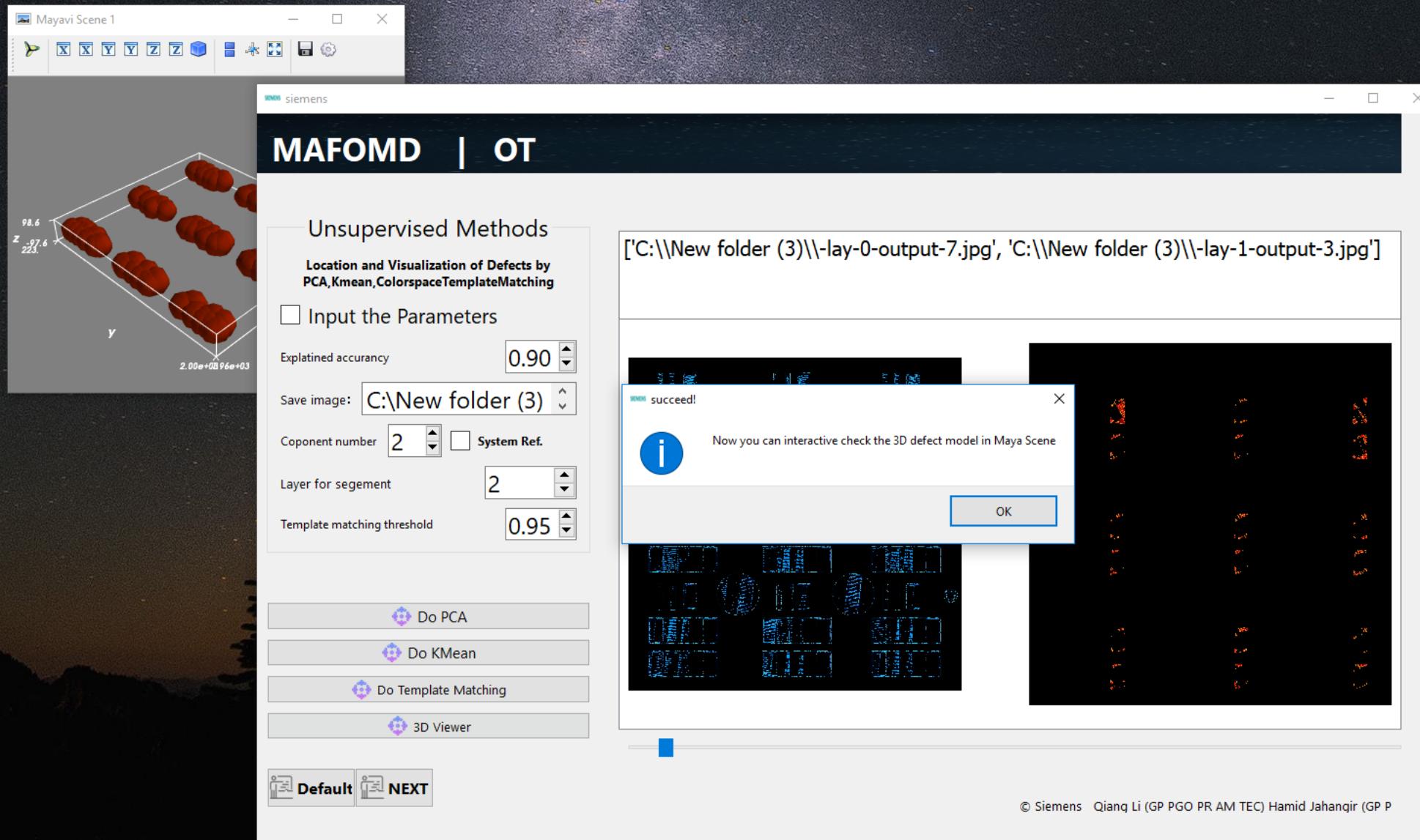
Layer for segment 2

Template matching threshold 0.95

 Do PCA Do KMean Do Template Matching 3D Viewer

[C:\New folder (3)\-lay-0-output-7.jpg, C:\New folder (3)\-lay-1-output-3.jpg]

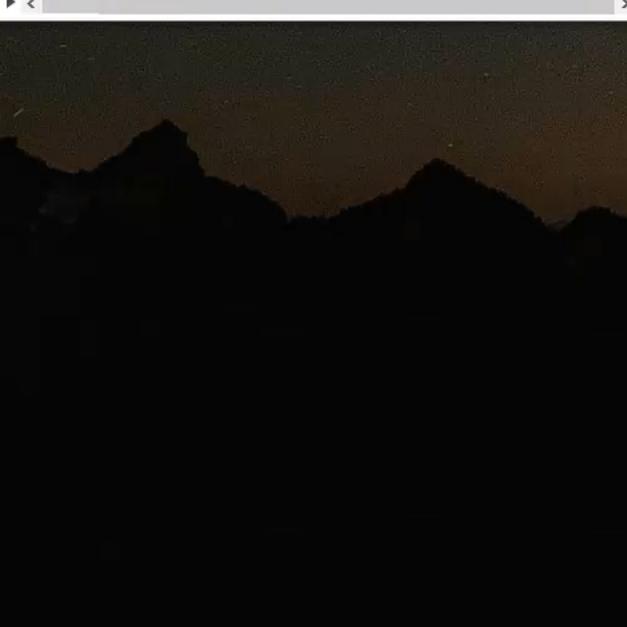
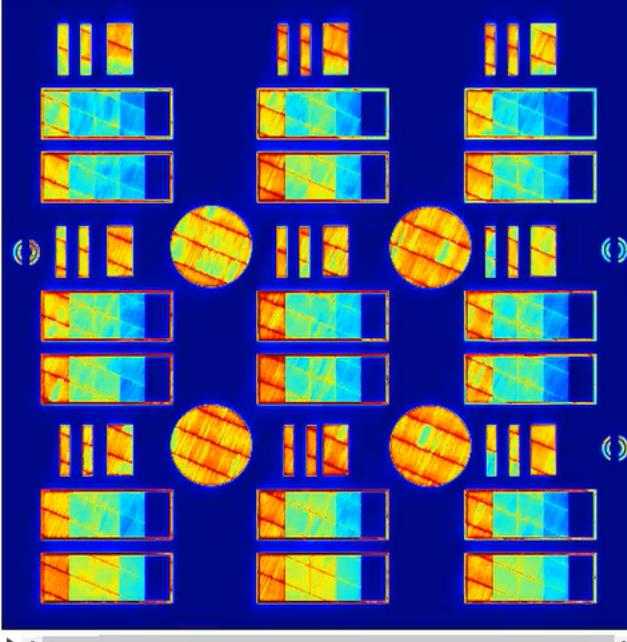
 Default  NEXT



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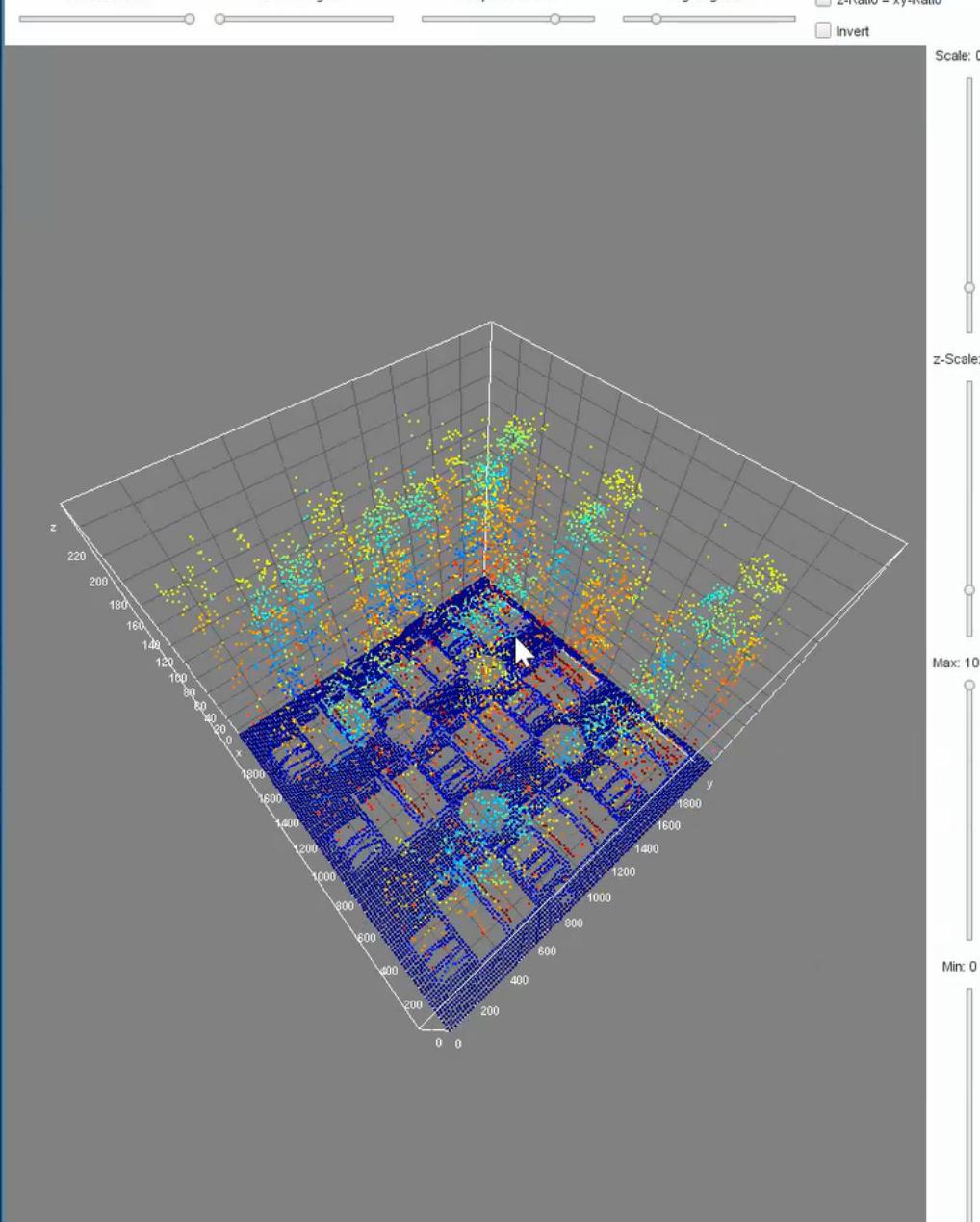
hotspotoriginalimgset (25%)

1/10 (0); 2000x2000 pixels; RGB; 153MB



Interactive 3D Surface Plot v2.95 (hotspotoriginalimgset)

Dots Grid Size: 512 Original Colors Smoothing: 0.0 Perspective: 0.78 Save Plot Display Options Lighting: 0.2 z-Ratio = xy-Ratio Invert



hotspotimgsetformax (25%)

45/82 (-lay-159-label-5); 2000x2000 pixels; RGB; 1.2GB

