

Read in the image, annotations and the data frame

(27, 4, 512, 512)

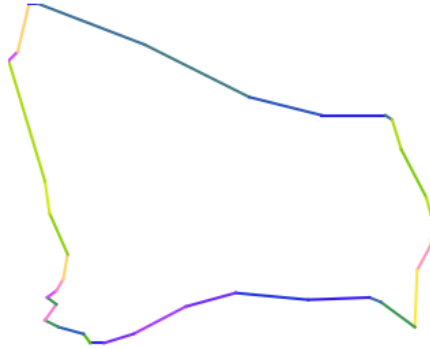
Visualize orientation of cell edge

```
label 4
area 17279
centroid-0 221.896348
centroid-1 231.103131
bbox-0 141
bbox-1 144
bbox-2 291
bbox-3 332
eccentricity 0.792619
orientation 1.247677
intensity_image [[0, 0, 0, 0, 0], [0, 0, 0, 0, 0], [0, 0, 0, ...
image [[False, False, False, False, False, False, Fa...
image_name 092622_ring_PDMSAp_10MCol_647-Act_561-Pax_488-...
vertices [[290.5, 186.0], [290.5, 180.0], [286.5, 177.0...
membrane_orientation [1.5707963267948966, 0.6435011087932843, 1.304...
actin_detected [[[60, 57], [39, 18]], [[174, 71], [153, 67]],...
actin_angles [0.49394136891958107, 1.3825748214901261, 0.27...
actin_orientation 0.558599
actin_spread 0.346269
plak_signal [502.0, 470.0, 413.0, 327.0, 281.0, 336.0, 496...
outside_ring_regions [[0, 9, 15], [0, 10, 15], [0, 11, 15], [0, 12,...
signal_edge_00 [1218.0708661417323, 1587.5771028037384, 1608....
signal_edge_01 [581.9409448818898, 646.2663551401869, 565.186...
signal_edge_02 [407.248031496063, 457.9789719626168, 481.2217...
signal_edge_03 [148.98425196850394, 148.76401869158877, 158.2...
signal_radial_00 [64.24659574468085, 85.42234042553191, 74.4386...
signal_radial_01 [22.763297872340427, 31.481063829787235, 27.03...
signal_radial_02 [26.648687943262413, 31.45613475177305, 23.964...
signal_radial_03 [6.66677304964539, 8.624716312056737, 7.063687...
Name: 3, dtype: object
```

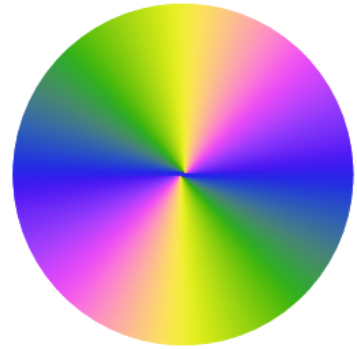
Cell shape



Edge orientation

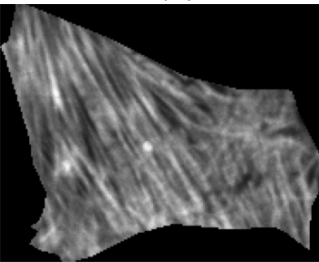


Color explanation



Visualize actin orientation

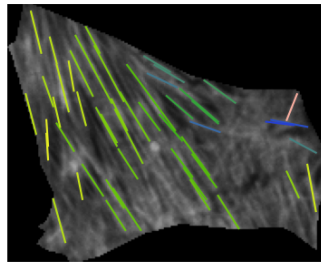
Actin max projection



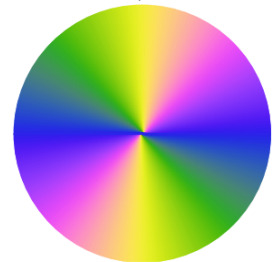
Actin segmented



Fibers orientation

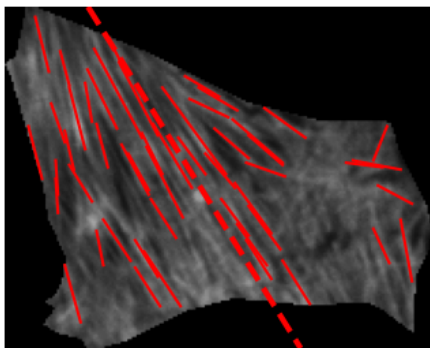


Color explanation



Edge orientation vs main flow of actin

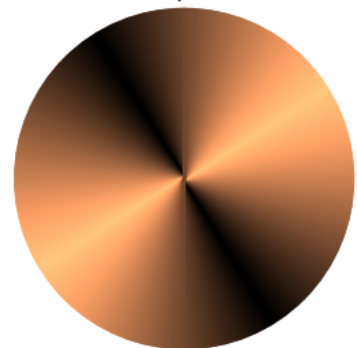
Fibers orientation



Edge vs actin

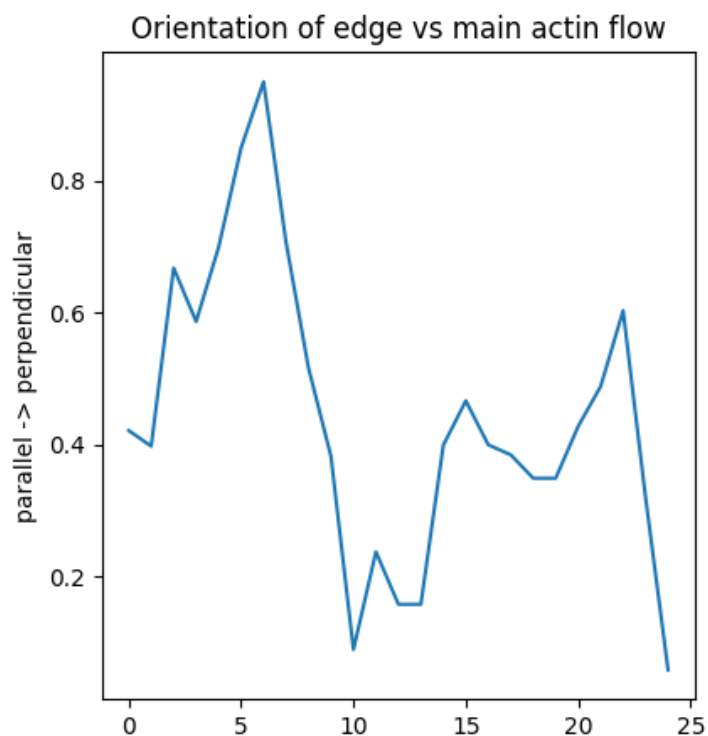
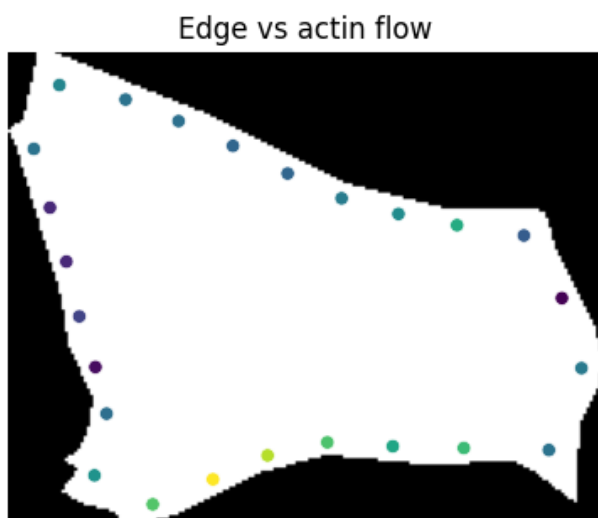


Color explanation

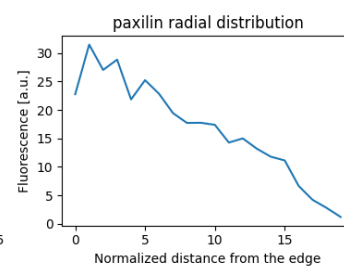
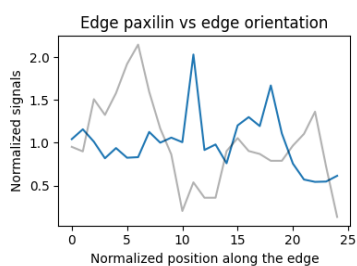
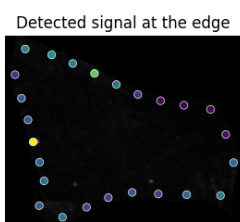
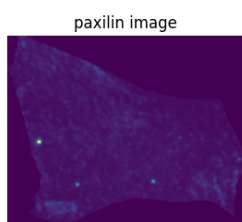
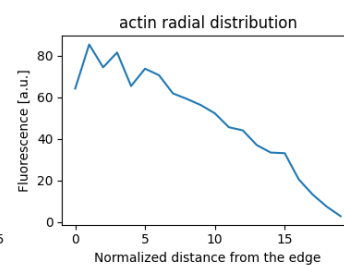
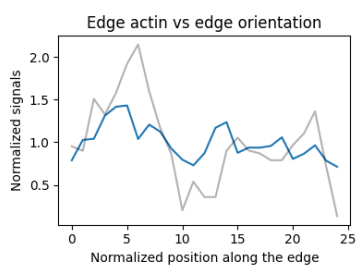
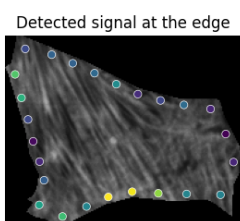
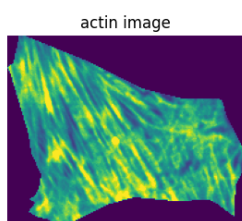
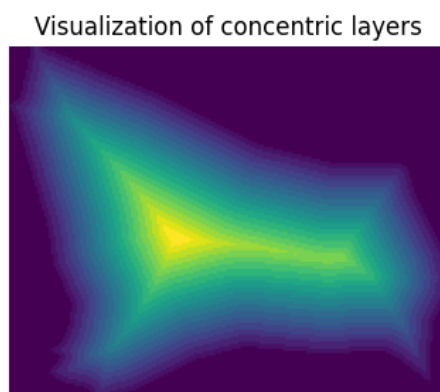
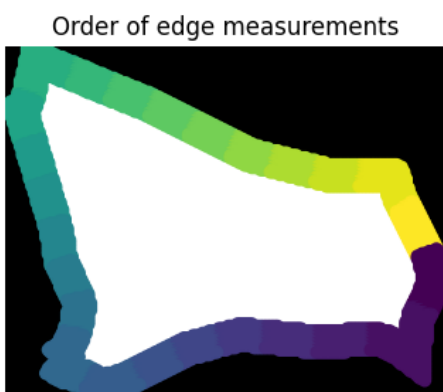


Calculate edge orientation based on edge regions

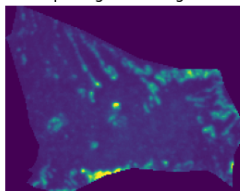
```
Text(0, 0.5, 'parallel -> perpendicular')
```



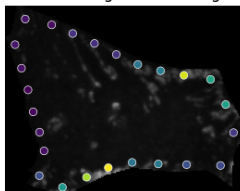
Characterize distribution of plakoglobin



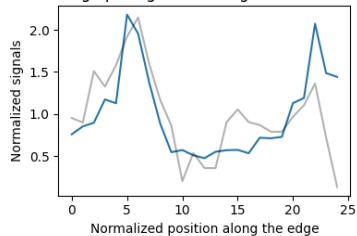
plakoglobin image



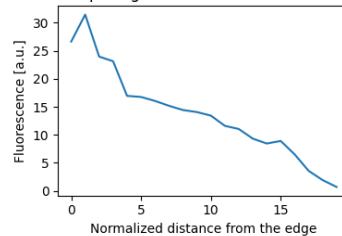
Detected signal at the edge



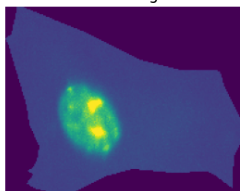
Edge plakoglobin vs edge orientation



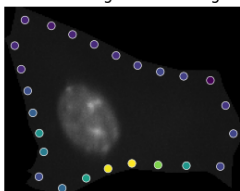
plakoglobin radial distribution



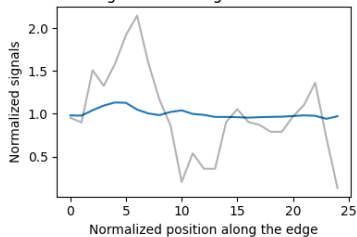
DAPI image



Detected signal at the edge



Edge DAPI vs edge orientation



DAPI radial distribution

