Subject: Ellipse fitting
Posted by on Thu, 09 Sep 2010 11:18:40 GMT
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Hi all,
I've got a problem when I try to find the orientation of a fitted ellipse of a region of interest (http://www.dfanning.com/ip_tips/fit_ellipse.html).
I've got an stack of images of an ellipse rotating. My problem arises when I try to find the eigenvectors of the covariance matrix, the signs of the components of them change randomly. In other words, I start with my ellipse in the 3rd quadrant. The first image gives the correct signs for the components of the principal eigenvector, but the second image doesn't give the signs of the components well, so in this case the eigenvector is located in the 4th quadrant, but my ellipse still stands in the 3rd quadrant!
I don't know if I have explained my problem correctly. The problem comes from the indeterminacy of the signs of the eigenvectors. If they had the correct signs, I would use the atan2 function, which will give the correct orientation. However, the signs aren't correct, so I can't get the orientation of the ellipse after a whole rotation.
Thank you very much