
Subject: Re: help needed in understanding `correl_images`
Posted by [Helder Marchetto](#) on Tue, 20 Sep 2016 08:00:59 GMT
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On Tuesday, September 20, 2016 at 3:51:58 AM UTC+2, sid wrote:

> On Monday, September 19, 2016 at 3:41:19 PM UTC+5:30, Helder wrote:

>> On Monday, September 19, 2016 at 10:19:25 AM UTC+2, sid wrote:

>>> Hello all,

>>> I have taken two images

>>> `image1(701,501)`

>>> `image2(701,501)`

>>>

>>> I need to find the xshift in these two images and have used the

>>> `correl_images` it gives a 15 by 15 pixel output.

>>>

>>> But couldnt understand what this output array is.

>>>

>>> Can anybody pls explain this.

>>> thanks

>>

>> Hi,

>> my guess, is that what you **really** want is `correl_optimize`. This uses `correl_images` and `corrmat_analyze` to give you the x,y-shift.

>> The alternative is to use phase correlation (https://en.wikipedia.org/wiki/Phase_correlation).

>>

>> Helder

>

> Thank you for the idea. But the problem is, I have a scattered region so this correlation method doesn't work properly. It gives some very high value of xoffset and yoffset which is not expected. So can you please let me know is there any other method to find the shift between images.

>

> Is it a good idea to make use of centroid.

>

> thanks

Hi,

I don't know what your images **really** look like (signal/noise,...), but what I use for **my** images is the phase correlation approach.

Here is roughly what I do:

- select from the images the sub-region you want to compare
- window these images (multiply by a function with 1 in the middle and zero at the edges) with either a sin function or something like a hamming window.
- make the fft of both
- multiply the fft of the first by the `conj()` of the fft of the second
- find the position of the max of the `real_part()`
- convert this to 2d array indices

It might seem tricky, but it's good to learn with.

