
Subject: Re: fft and least squares problem

Posted by [rogass](#) on Tue, 14 Aug 2012 14:13:01 GMT

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Am Dienstag, 14. August 2012 16:06:53 UTC+2 schrieb (unbekannt):

> Hi Folks,

>

>

>

> I try to estimate the subpixelshifts if an image is compared with its shifted representation, but something is going wrong. Maybe somebody can help me.

>

>

>

> s=size(im,./dim)*1.

>

> im1 =im

>

> dx=.25

>

> dy=.3

>

> im2=image_shift(im1,dx,dy);more precise then
interpolate(im,findgen(s[0])+dx,findgen(s[1])+dy,grid,/'cubic')

>

> fim1=fft(im1,-1)

>

> fim2=fft(im2,-1)

>

> corr=fim1*conj(fim1)/abs(fim1*fim2)

>

> corr=shift(corr,s/2)

>

> phase=atan(imaginary(corr)/real_part(corr))

>

> wx=(findgen(s) mod s[0])*2.*pi/s[0]

>

> wy=(rebin(findgen(1,s[1]),s))*2.*pi/s[1]

>

> r=5;fitting radius

>

> phase2=phase[s[0]/2 - r : s[0]/2 + r,s[1]/2 - r : s[1]/2 + r]

>

> wx2=wx[s[0]/2 - r : s[0]/2 + r,s[1]/2 - r : s[1]/2 + r]

>

> wy2=wy[s[0]/2 - r : s[0]/2 + r,s[1]/2 - r : s[1]/2 + r]

>

> print,la_least_squares(transpose([[wx2[*]],wy2[*]])),phase2 [*])

>
>
>
> The last line should give dx and dy but its erroneous. I don't really know why!
>
>
>
> Thanks in advance
>
>
>
> CR
Typo!

Please replace:
im2=image_shift(im1,dx,dy)
with:
im2=image_shift(im1,dx,dy,interp_type='F')

Cheers
CR
