
Subject: Re: coherence test implementation
Posted by [Dick Jackson](#) on Thu, 13 May 1999 07:00:00 GMT
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(quick, before they wake up in Australia! :-)

Hi again,

Dick Jackson wrote:

>
> You piqued my curiosity, since you're right, there had to be a more
> efficient way! My attached coherence.pro should do the trick, and I
> clock it at about 60 times faster with a 300x300 test.
> [...]
> Generalizing coherence.pro to allow variable 'width' [...]
> wouldn't be hard

I looked at my code again, and realized I was duplicating the function of the IDL CONVOL routine. That sure simplified things! (and in my 300x300 test, cut time in half yet again) Adding the 'width' idea was trivial. I think writing helpful comments was the worst part. :-)

And, as with any Good Thing in IDL, it can be written in one line:

```
coh = Sqrt((Convol(array ^ 2.0, Replicate(1, width, width)) $  
          - (Convol(Float(array), Replicate(1, width, width))^2 $  
            / (width ^ 2))) $  
          / ((width ^ 2)-1))
```

(the attached .pro is much easier to read and understand)

Enjoy.

Cheers,

--

-Dick

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

File Attachments

1) [coherence.pro](#), downloaded 149 times
