
Subject: Re: FFT of gaussian

Posted by [Gray](#) on Wed, 12 Jan 2011 17:42:03 GMT

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On Jan 12, 9:28 am, "Kenneth P. Bowman" <k-bow...@null.edu> wrote:

> In article

> <e8f1db77-67a5-491f-9671-fbd85c50a...@a10g2000vby.googlegroup s.com > ,

>

> Gray <grayliketheco...@gmail.com> wrote:

>> Hi all,

>

>> Here's something I don't really understand. The Fourier transform of

>> a Gaussian function is another Gaussian... so why if I create a

>> Gaussian and run FFT do I not get a Gaussian? Is it because my

>> Gaussian vector is discrete? How can I fix this?

>

> You get the discrete transform of a discrete approximation to

> a Gaussian, which is also a discrete approximation to a Gaussian.

>

> Try this:

>

> IDL> x = -5.0d0 + 0.1d0*dindgen(101)

> IDL> y = exp(-(x^2))

> IDL> plot, x, y

> IDL> yt = fft(y)

> IDL> plot, shift(abs(yt),50)

>

> Don't forget, the IDL always does a full complex FFT.

>

> Ken Bowman

Ah, the shift(abs()) helped very much! Thanks :)
