Subject: Wiener deconvolution, anyone?
Posted by Richard G. French on Thu, 16 Dec 1999 08:00:00 GMT
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Hi, gang -
I am looking for a 2-D deconvolution routine that
uses a Wiener filter. The specific application is to sharpen up
some Hubble Space Telescope images of Saturn's rings. I have a
reasonable handle on the Point Spread Function (the response to a point
source). I've tried using FFT's and the deconvolution theorem,
and I've tried doing lots of filtering of the input and output, but
it has not been very satisfactory. I've heard good things about
Wiener deconvolution but I have not seen a reference that deals with it
in two dimensions.
Any of you folks out there in the oil business have any suggestions? I
know that is one place where this is done!
Thanks for any suggestions!
Dick French
Astronomy Dept
Wellesley College
rfrench@wellesley.edu

Subject: Re: Wiener deconvolution, anyone?
Posted by Richard G. French on Fri, 17 Dec 1999 08:00:00 GMT
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htonishi wrote:
>
> This is not exactly what you're asking for but you might find something
> useful here
>
> http://www.numis.nwu.edu/ftp/pub/restorations/
>
> I've used their max_entropy code with some success.
>
> Howard Onishi
>
THanks, Howard - I can't seem to get through on this site, but I will
keep trying!
Dick

Subject: Re: Wiener deconvolution, anyone?
Posted by htonishi on Sat, 18 Dec 1999 08:00:00 GMT
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Dick,

Hmmm, I just tried to connect and was refused. It looks like they removed public access. Sorry about that. Here is another link that I just checked. It contains a nice one page description of the 2D Wiener filter. No code, just equations. It appears to be part of a master's thesis.

http://www.cs.indiana.edu/l/www/hyplan/tveldhui/papers/MAScT hesis/node15.html

Howard

Subject: Re: Wiener deconvolution, anyone?
Posted by badastro on Mon, 20 Dec 1999 08:00:00 GMT
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In comp.lang.idl-pvwave Richard G. French <rfrench@wellesley.edu> wrote:
> Hi, gang -
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> and I've tried doing lots of filtering of the input and output, but
> it has not been very satisfactory. I've heard good things about
> Wiener deconvolution but I have not seen a reference that deals with it
> in two dimensions.

I hate to mention it here on this group, but I believe there is an IRAF package that does this. Do you have this loaded up at Wellesley? It might be an SDAS package, which you can get from the Space Telescope Science Institute (www.stsci.edu).

* * * * * The Bad Astronomer * * * *

Phil Plait badastro@badastronomy.com
The Bad Astronomy Web Page: http://www.badastronomy.com
