Subject: Re: Optimal interpolation
Posted by Robert Stockwell on Thu, 22 Aug 2002 15:49:18 GMT
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Luis wrote:
> Hi,
>
> does somebody know abouts an optimal interpolation subrroutine. I am trying
> to compare some different interpolation techniques and this is the only one
> than I don't have programmed.
>
> thank you!
>
> ---
> Luis Prieto Godino
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> ---
>
>

I've got some Loess fitting routines for 3D interpolation
of a two component vector field. It uses SVD to solve
the 3D second order polynomial fitting. These fitting parameters
are then used to interpolate the data. The Loess part is
a local fitting routine that weights the data based on
its distance from the required point. That weighting could
easily be modified to be based on some error measurement and
therefore become an optimal interpolation routine.
It also returns an estimate of the error of the value of
the interpolated point.

Does this sound like it would be useful?

It would take me a bit of work to bang it into a generalized
form. Also, my code for selecting the "near points" is a bit outdated
as it is based on 2 one dimensional histogram with return_index. That
part should be rewritten.

Cheers,
bob