Subject: Re: weighting: irregular grid
Posted by pgrigis on Fri, 05 Sep 2008 16:00:23 GMT
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Mark wrote:
> Hello.
>
> I'm sure someone has come up with code to do this, so rather than re-
> invent the wheel:
>
> I have a dataset: f(x,y),x,y, where the x and y grids are somewhat
> irregular. I can use trigrid and triangulate to get an image of f, of
> course, but what I really need is f weighted by the area each data
> point occupies.
>
> One can define the area that a data point occupies by drawing lines
> perpendicular to the line connecting the point with neighboring
> points: eventually one will have some sort of polygon enclosing the
> point. One can then weight the f-value by the area of the polygon.
> Something like this would work very well for me.

This is called the "voronoi" region, which can easily be computed
from the Delauney triangulation: see 21.7 in Numerical recipes 3d
edition.
(ignore my previous post).

Paolo

>
> Does anyone know of code that accomplishes something like this before
> I kill a day or two trying to write it myself? No doubt IDL has a
> canned routine that does this but I haven't been able to find it....
>
> Thanks very much,
>
> Mark