Le mercredi 13 avril 2016 17:24:24 UTC+2, ysoo...@googlemail.com a écrit :
> On Wednesday, April 13, 2016 at 11:12:34 AM UTC-4, Paul van Delst wrote:
>> On 04/13/16 08:50, ysoobiah@googlemail.com wrote:
>>> On Wednesday, April 13, 2016 at 8:40:11 AM UTC-4, there _is_hope
>>> wrote:
>>>> Dear All IDL users,
>>>>
>>>> I am currently looking for the best way to interpolate an irregular
>>>> 3-d data set to a regular 3-d grid.
>>>>
>> [snip
>>> However I do not immediately see how to achieve a similar result when
>>> using grid3 e.g.
>>>
>>> Result = GRID3(X, Y, Z, F).
>>
>> Does
>>   http://www.harrisgeospatial.com/docs/GRID3.html
>> provide additional info for your needs?
>>
>> cheers,
>>
>> paulv
>
> From what I can tell it is unable to interpolate to a specific pre-defined set of points and only interpolates to an equally spaced grid of a certain number of points in x, y, z, which is not what I want.
>
> A compromise would be to be able to interpolate to a number of points within a particular range range, e.q. theta - -40 to +40 for example, but I don't think it can do this either as I am assuming the number points are scaled between 0 and 1.
>
> If anyone can instruct on how to use grid3 to achieve what I am after I would be very grateful.
>
> Thanks.

The available 3D-interpolators in IDL are GRID3 or the combination QHULL/QGRID3.
The first one fits a smooth function by using the Shepard method, the second build a regular grid from a Delaunay triangulation. In both, you can define the output nodes.
For instance, the call R = grid3(X, Y, Z, F, Gx, Gy, Gz) interpolates the function F given at coordinates X,Y,Z on a regular grid (the array R) or the G nodes when specified.
Please carefully read the documentation before to post.
alx.