
Subject: Re: Interpolating Irregular 2D Data
Posted by [peter](#) on Wed, 26 Mar 1997 08:00:00 GMT
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Achim Hein (hein@nv.et-inf.uni-siegen.de) wrote:

: Bijan Pesaran wrote:

: >

: > I have $z=(x,y)$ data on a spiral and I want to sample it on a
: > grid for further manipulations, specifically kernel smoothing.

: >

: But I think the faster way is to interpolate the irregular data down to
: equidistant twodimensional axis - simultaneously, you smooth your data
: because of the interpolating.

Achim's suggestion is a good way to go -- the data on the spiral can be placed onto a grid and smoothed at the same time by the procedure known as gridding (essentially, convolving the non-rectilinear data with a smoothing kernel onto the grid points). Very hard to do fast in IDL, due to required (?) nested loops, since potentially every data point lies at unique distances from its surrounding grid points, and thus requires calculation of the interpolation weights; I've used a `call_external` program to do it rapidly (and, in fact, to do spiral to rectilinear conversion).

Peter
