
Subject: Experience with TRIGRID?

Posted by [manizade](#) on Fri, 08 Oct 1993 13:44:42 GMT

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I have tried using the TRIGRID procedure on a Sun using both IDL 3.0 and 3.1 with disappointing results. The simple example in the IDL Basics book worked fine; when I used my own data the "interpolation" produced odd values in the output (e.g. spikes), particularly at the boundaries of the triangular regions. The problem is worse when the number of points in the interpolation grid is increased.

For example I called trigrid three ways and looked at the min and max of the output:

```
triangulate,xvec,yvec,tr,boundary,repeats=reps
t=trigrd(xvec,yvec,zvec,tr,/smooth)
tt =trigrd(xvec,yvec,zvec,tr)
ttt=trigrd(xvec,yvec,zvec,tr,grid_spc,grid_win); <--{ 250x250grid
```

```
raw data yvec  min & max :   0.0560000   0.598000
smth grid t    min & max :  -0.112013   0.760076
lin grid tt    min & max :  -1.00000   0.652344
large grid ttt min & max :  -2.82153   1.00781
```

Obviously a linear interpolation should not produce values outside of the input value range.

I have since written a program to sidestep trigrid by using triangulate and polyshade, which produces a 2-D image I can manipulate. But I would rather work with the interpolated 3-D data that trigrid is supposed to produce.

Can anyone please provide some insight into what TRIGRID is doing? Has anyone encountered bugs? Are there restrictions that are not documented in the IDL Help?

Thanks in advance for any ideas.

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