
Subject: Re: Random problem with Delaunay triangulation - Correction

Posted by [wgallery](#) on Tue, 11 Sep 2007 21:56:38 GMT

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On Sep 11, 5:15 pm, Bill Gallery <wgall...@aer.com> wrote:

> On Sep 11, 3:27 pm, "Haje Korth" <haje.ko...@nospam.jhuapl.edu> wrote:

>

>> Bill, here a practical tip: Have you tried to randomly reshuffle your input

>> data? Does this make a difference? H.

>

>> "Haje Korth" <haje.ko...@nospam.jhuapl.edu> wrote in message

>

>> [news:fc6oi5\\$ei3\\$1@aplnetnews.jhuapl.edu...](mailto:news:fc6oi5$ei3$1@aplnetnews.jhuapl.edu...)

>

>>> Bill,

>>> you just hit a nerve with me. I thought I was the only one having those

>

> Haje,

>

> I did not try reshuffling the input data, but did find a fix.

> Originally, the input data had a minimum latitude of 30.0 deg N and

> the specified regular grid also had a minimum latitude of 30.0. When

> I expanded the input data to have a minimum latitude of 20 deg N, the

> error message went away. Apparently you need data outside the area of

> interest for the interpolation to be robust.

>

> Further experimentation showed that when the minimum latitude of the

> input data was 30. deg, the interpolated values at 30 deg for the

> cases that did not fail showed large excursions from expected values.

> This may be partially due to the nature of the input data, which is

> poorly sampled below ~40 deg N (temperature data from the SABER

> instrument on the TIMED satellite.)

>

> Does anyone has any experience with the relative merits of the

> following routines for interpolation on a sphere?

>

> 1. qhull and griddata

>

> 2. sph_scat.pro

>

> 3. triangulate and trigrid

>

> Bill

Correction, expanding the input data did not correct the problem: I
got the same message from a different case.

Puzzled

