
Subject: Re: Need Some Good Ideas

Posted by [Craig Markwardt](#) on Thu, 21 Feb 2002 07:02:37 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hey David--

Interesting problem! The first thing that comes to mind is to try to smooth the data somewhat. For example, by fitting a spline through it (SPL_INIT), and then interpolating the spline onto a much finer grid (SPL_INTERP).

Now, that doesn't totally solve your problem, because the interpolants will still be irregularly spaced, but they will be much more finely sampled. You could then sum them to get an arc-length over each segment, and then resample after adjusting for the arc length.

Do you have some example data?

Craig

David Fanning <david@dfanning.com> writes:

> Folks,
>
> Do you have your thinking caps on? I'm looking for
> a few good ideas.
>
> I have a bunch of blobs. (Think spots on the
> Gateway cow.) I would like to analyze the curvature
> and bends in the perimeter of the blobs. I have
> the indices of the points that make up the blob, and
> I have obtained the "perimeter" points by contouring
> the blob. Unfortunately, these perimeter points are
> not evenly distributed. (Think of a blob that has a
> long, straight side. The contour command will put a
> point at either end of the straight bit, so the points
> on that side of the blob are sparse, while the points
> along a tight bend on the other side of the blob
> are dense.)
>
> I say "unfortunately" because we have a method that
> uses the derivative of the perimeter at each point
> and the FFT transform of the derivative distribution,
> but it seems to be giving funny results because of this
> point distribution problem.
>
> Has anyone heard of this kind of curvature analysis
> before? Any pointers to literature? I've heard that

> IDL can be used to solve these kinds of problems. :-)
>
> Thanks,
>
> David
> --
> David W. Fanning, Ph.D.
> Fanning Software Consulting
> Phone: 970-221-0438, E-mail: david@dfanning.com
> Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
> Toll-Free IDL Book Orders: 1-888-461-0155

--

Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
