Subject: Re: A Contour Tracking Problem
Posted by Chip Eastham on Wed, 02 Jun 2010 13:56:36 GMT
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On Jun 2, 9:04 am, jgrimm...@yahoo.com wrote:
> I would very appreciate if I could get help on this problem. It is
> mostly an imaging problem, but may involve some mathematical
> issues. Hence the crosspost. Rather than be very general, I
> will explain the actual example I am confronted with to keep
> things simpler and clearer.
>
> I have an image (digitally acquired), that represents the
> contours of an unknown function. In this particular case, the
> contours are interference fringes of a thin film and hence
> represent contours of constant film thickness. I now wish
> to get a map of the actual thickness, given that I know
> the real thickness at some reference point and I can somehow
> differentiate between going 'uphill' vs 'downhill'. This is just
> the reverse of the usual plotting problem where one *knows*
> a function z = z(x, y) and then gets a contour plot of z.
> Assume that we can process the image to the point that
> we have just black or white regions and so we can clearly
> determine when a fringe is crossed while moving along a
> particular direction.
>
> While one can keep track of contour crossings as one moves
> along a straight line, the part that I cannot get a handle on
> is how to keep track of the contours and know when one is
> back at a contour that one has already crossed. In my case,
> the contours are closed and there are multiple local maxima
> and minima to deal with.
>
> Any pointers will be appreciated.
>
> Thanks.
>
> J. Grimmond

Do you have colors of polarization to tell
when you are going "uphill" vs. "downhill"?

regards, chip

Subject: Re: A Contour Tracking Problem
Posted by penteado on Wed, 02 Jun 2010 16:19:04 GMT
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If you know the value at some reference point and know how much it changes on each contour step, you know the value at every point in one of the contours. Taking these values, you could then interpolate for the other points. One way to do it would be make a arrays with the location and value of every contour point, and then give those to IDL's triangulate and trigrid(), to obtain the rest.

Subject: Re: A Contour Tracking Problem
Posted by jgrimmond on Tue, 08 Jun 2010 04:20:24 GMT
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On Wed, 2 Jun 2010 06:56:36 -0700 (PDT), Chip Eastham <hardmath@gmail.com> wrote:

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>>
>> J. Grimmond

>
> Do you have colors of polarization to tell
> when you are going "uphill" vs. "downhill"?

Unfortunately, no.

J. Grimmond
