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