Subject: Re: How can I find Max and Mins of array by seeing which point's derivative is closest to 0
Posted by pgrigis on Tue, 22 Jul 2008 19:06:28 GMT
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plot your derivative and you'll see where the problem lies...

Paolo

lukedimpe...@yahoo.com wrote:
> Fellow programmers,
>
> I have produce several ~ shaped plots in IDL and would like to
> find the Max and Min of the crest and trough respectively. Yet, the
> points of the ~ reach above and below the tops and bottoms of the
> curves trough and crest. So I thought I would locate them by find
> where the derivative of the curve equalled zero, right? Yet, it was an
> array so the wasn't an exact 0. So, I figured I would attempt to find
> the minimum of all the positive array slopes(derivatives) and this
> would be a point right after a minimum or before a maximum. Or you
> could do it by finding the maximum of all the negative array slopes
> and that would correspond to a point just before a minimum or right
> after a maximum. It didn't really matter if I was off by one point
> because there were so many points in the array. Here's the fun part
> though; I tried several different lines of codes mostly include where
> commands finding each time the max and min would be at the end and NOT
> at the top of the crest or bottom of the trough like I wanted them to
> be!
>
> In case the squiggles aren't visible enough the plot is a fit by a 3rd
> order polynomial, sort of like a sideways s. Not really this S though
> because doesn't really look like a function.
>
> Anyway, please help and please feel free to email me
> lukedimperio@yahoo.com
>
> Luke D'Imperio
> SUNY Oneonta
>
> P.S. I'm getting suspicious of a invisible zero at the beginning of
> the curve. Don't let it bother you too much though.