Subject: Re: Problems on the Savitzky-Golay smoothing filter
Posted by jhongs1988 on Fri, 04 Mar 2016 21:35:33 GMT
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El miércoles, 20 de mayo de 2009, 5:59:10 (UTC-5), mengran escribió:

```
>  Hi,everybody,
>         I have got a annoying problem about the implementing the
>  Savitzky-Golay filter to smooth the time series RS data  in the IDL.
>  Actually, I know the function of the Savitzky-Golay filter in IDL is
>  SAVGOL.But the question is the result I got is either a horizon line
>  or the same as the original line(In other words, the filter seems not
>  to work at all), when I changed the parameters of the SAVGOL function.
>  (when the  DEGREE = NL + NR(PARA OF THE SAVGOL FUNCTION), THE RESULT
>  IS THE SAME AS THE ORIGINAL, OTHERWISE, THE RUSULT IS A HORISON LINE)
>         My pro is as follows. The class1 to class9  from txt files are
>  the samples of the time series RS data.
>         Is there sth wrong with my code ? Or  the RS data that  I used
>  is not appropriate for the  Savitzky-Golay filter, and I take a wrong
>  method to smooth data ?  I need your suggestions, thanks  a lot !
>
>  PRO Savgol_example
>
>    ;RESTORE, 'C:\WorkSpace\Default\myPlotTemplate.sav'
>    rootPath = 'C:\WorkSpace\Default\class'
>
>     n = 1 & filename = strarr(9)
>  for i = 0, 8 do begin
>
>   filename[i] = strjoin([rootPath, strtrim(n, 2),'.txt'])
>       n++
>
>  endfor
>  for i = 0,8 do begin
>
>    plotTemplate = ASCII_TEMPLATE(filename[1])
>    y1 = READ_ASCII(filename[1], TEMPLATE = plotTemplate, COUNT =
>  $               count,NUM_RECORDS = 46 )
>    x = indgen(46)
>   iPlot,x,y1.FIELD1, NAME = 'Original Curve', $
>    COLOR=[255, 0, 0], SYM_INDEX = 4, yrange = [0,+8000], VIEW_TITLE =
>  strmid(filename[1], 21, 6)
>    void = ITGETCURRENT(TOOL=oTool)
>    void = oTool->DoAction('Operations/Insert/Legend')
>
>
>   ; savgol
>   savgolFilter = SAVGOL(2, 2, 0,4)
>   iPlot,x,CONVOL(y1.FIELD1, savgolFilter), /OVERPLOT, $
```

```
>     COLOR=[0, 0, 255], THICK=2, $
>     NAME='Savitzky-Golay'
>     void = oTool->DoAction('Operations/Insert/LegendItem')
>    ;SAVE, plotTemplate, FILENAME='C:\WorkSpace\Default
>  \myPlotTemplate.sav'
>
>   endfor
>
>  END
```
