

SMOOTH CURVES in MATLAB: Several Files

There are 2 MATLAB files that can mimic the java script file for smooth curves.

INPUT: A set of ordered pairs: XDATA and YDATA which should be rows in MATLAB.

GRID: There is a 15 by 15 grid; this can be changed by altering some code.

There are 'checks' for items in the code.

OUTPUT: You can choose to get a graph 'through' the data set in 3 ways.

< > Connect the dots with straight lines; usually this will not be smooth.

< > Connect the dots using cubic Bezier curves; the control points and slopes are shown.

< > Connect the dots using natural cubic splines.

FIRST FILE: name drawsmoothcurveAB4.m

< > This file lets you choose which way you want to connect the dots. You can have more than graphed for the same picture.

SECOND FILE: name drawsmoothcurveAB5modifiedFbig.m

<> This file turns off the control points and slopes (ignore any x-label that appears).

<> There is a new option: prior to executing the file enter code for a formula for a function that you may have used to generate the data set. Carefully read the directions which appear when you use help in MATLAB with the file name.