1 Program 3dTsmooth

1.1 Purpose

Smooths each voxel time series in a 3D+time dataset and produces as output a new 3D+time dataset.

1.2 Usage

3dTsmooth [options] dataset

1.3 Options

General Options:

-prefix ppp = Sets the prefix of the output dataset to be 'ppp'.
[default = 'smooth']

-datum type = Coerce the output data to be stored as the given type.
[default = input data type]

The following options define the smoothing filter to be used. All filters in this program use 3 input points to compute one output point:
a = input value before the current point
b = input value at the current point
c = input value after the current point
[at the left end, a=b; at the right end, c=b]

-lin = 3 point linear filter: 0.15*a + 0.70*b + 0.15*c
[This is the default smoother]

-med = 3 point median filter: median(a,b,c)

-osf = 3 point order statistics filter:
0.15*min(a,b,c) + 0.70*median(a,b,c) + 0.15*max(a,b,c)

-3lin m = 3 point linear filter: 0.5*(1-m)*a + m*b + 0.5*(1-m)*c
Here, 'm' is a number strictly between 0 and 1.