
Subject: very fast spline interp function for heavy oversampling?

Posted by [R.G. Stockwell](#) on Tue, 20 Jun 2000 07:00:00 GMT

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Greetings,

I have a situation where I take a time series, and need to interpolate the function to many more samples.

i.e. original time index = [1,2,3,4....10]

and I need samples at new time index =

[1.000,1.001,1.002.....9.999,10.000].

The canned IDL routine spline() works great, but is slow. Unfortunately, I don't have time to rewrite the interpolation to something more efficient.

I don't want to use any linear scheme to interpolate, since I want a smooth function (i.e. smooth "derivatives") around the data points. I would guess that

it would be easy to efficiently calculate this interp with spline, perhaps

some vectorization could be put into the function. Or perhaps an

"upsample" function would work, but modifications would be needed as the time series is not evenly sampled.

Are there any user routines out there that can do this interpolation efficiently?

Cheers,

bob
