Subject: a plea for more reliable mathematical routines
Posted by Richard G. French on Thu, 09 Sep 1999 07:00:00 GMT

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>
> In addition, it seems that RSI has done a sloppy job integrating LSODE
> into IDL. they don't support all the options the original LSODE has,
> including the useful ones, like single-stepping through the integration.
> the documentation seems haphazardly put together. for example, their
> description of output value STATUS=3 is
>
> "The integration was performed successfully, and no roots were found"
>
> what roots?? anyway, this makes me doubt the correctness of the
> implementation.

I have the same uneasiness about the implementation of mathematics routines in IDL, having
found some simple errors in things like CURVEFIT over the past few years. If RSI wants
to make inroads into the serious scientific computing arena, they will have to hire some
mathematicians who will take the time and care to make sure that the mathematical functions
really are properly handled. Otherwise, folks will head off to MATLAB or Fortran (gasp!) or
other languages where you can count on getting a Bessel function when you call a Bessel
function, or get a random number when you want one. I for one would prefer that RSI
consolidate their current program structure and shore up the computational and mathematical
functions to be competitive with other programs.

Dick French