Subject: Re: Singular jacobian in broyden
Posted by Ralf Schaa on Thu, 24 Feb 2005 09:53:20 GMT
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Jerome Colin wrote:
> Hello,
>
> I try to use the Broyden function to resolve a set of three equations.
> I've declared the three equations in a function, and provided initial
> guess. The code is compiled well, but I get the message :
> 'Singular jacobian in broydn'
>
> As I'm not familiar with this method, I'd appreciate any help and/or
> comments about the source of this error.

Jerome,

Please have a look at the numerical recipes, Chapter 9.7 "Root Finding
and Nonlinear Sets of Equations". On page 382 you will find the
paragraph "Multidimensional Secant Methods: Broydenï¿½s Method" and on
page 386 there is a comment on singular jaciobians.
Download the pdf-files from numerical recipes e.g. at:
http://www.library.cornell.edu/nr/cbookfpdf.html

I had difficulties using Broyden method's as implemented in IDL
following the numerical recipes, since it is very strong depending on
the start vector.
I used methods in Mathematica though and had 'the feeling' it worked
better, but I could not proove it.

-Ralf

Subject: Re: Singular jacobian in broyden
Posted by Jerome Colin on Thu, 24 Feb 2005 10:34:49 GMT
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Thank you Ralf !

Jerome
