Subject: Re: diagonal dominant
Posted by on Thu, 31 Jan 2013 13:26:18 GMT
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Den torsdagen den 31:e januari 2013 kl. 14:05:46 UTC+1 skrev Gompie:
>> Can you describe how you are using the SVD to solve your equation? You have mentioned calculating the inverse of A but that is not necessary. From what I've read, it is better to multiply the B vector by the inverse SVD components in succession than calculating the inverse of A and then multiplying B with that
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> I am now using
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> svdc,A ,w,u,v,/double
>
> X=SVSOL(U, W, V, rhs,/double), Here A is 255X400 matrix and the duplicate rows have not been removed. Do you think I should do it differently?

From the documentation of svsol: "An n-element vector containing "singular values." Normally, W is returned from the SVDC procedure. Small values (close to machine floating-point precision) should be set to zero prior to calling SVSOL."

You don't mention doing this so I assume you don't. This is a crucial step if you want to be able to handle singular or near-singular matrices.

Note also that another source of confusion is the way the A matrix is represented in IDL. I don't know what conventions you are using but SVDC assumes row-major. You can change that with the COLUMN keyword.