Subject: Coupled non linear first order equation
Posted by say_cheese74 on Tue, 15 Mar 2016 22:07:01 GMT
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I have a system of (momentum) equations in cylindrical coordinates:
(r,theta,phi)

rho*(dv/dt+(v.del)v=A(r,theta,phi)
where the velocity v(r,theta,phi) and A are vectors and dv/dt is the partial derivative wrt time. del is the gradient.

I am trying to find the steady state solution to the equation
(v.del)v=A.

I have tried different simple methods but nothing converges. Any suggestions .

Thanks
Jay

Subject: Re: Coupled non linear first order equation
Posted by Craig Markwardt on Wed, 16 Mar 2016 17:24:29 GMT
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On Tuesday, March 15, 2016 at 6:07:03 PM UTC-4, say_cheese74 wrote:
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>
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>
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Obvious question: did you try Runge Kutta (IDL's RK4?).

Craig