Subject: Re: Update Newmark convolution
From: Quentin Brissaud
Date: 03/17/2018
To: Dimitri Komatitsch

The variational approach will be
different if we solve (compute) the convolution directly
instead of using an equation of evolution (an ADE auxiliary
differential equation) for the memory variables.
What I suggest is to solve the following stationary
equation:
$\int_\Omega \alpha\, \phi\, d\Omega = \int_\Omega \nabla.\boldsymbol{v}\, \phi\, d\Omega = - \int_\Omega \boldsymbol{v}.\nabla\, \phi\, d\Omega + \int_\Gamma \boldsymbol{v}.\boldsymbol{n} d\Gamma$
where α is an auxiliary variable such that $\alpha = \nabla.\boldsymbol{v}$.
We will then inject this α in the convolution.

Quentin