

Title: Computational Physics - Lecture 16

Date: Nov 02, 2018 01:00 PM

URL: <http://pirsa.org/18110042>

Abstract:

- Today
- 1 - Finish advection eqn in a periodic domain
 - 2 - Impose a no incoming bdy condition to $U_t = U_x$
 - 2a) see what happens if you set a value at the wrong bdy
 - 3 - Convince yourself (at least!) that the solutions in (1) & (2) are correct
 - 4 - Move to 1d wave equation $\phi_{tt} = \phi_{xx}$

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4a) on a periodic grid

4b) on $x \in [0, L]$ and impose no incoming waves at both borders

4c) Show convergence of obtained solution

Steps for dealing with body conditions.

- Time loop
- evaluate derivatives
 - evaluate RHSs
 - modify RHS to impose body condition
 - update (intermediate or full step!)

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