$$\frac{\partial u}{\partial t} = -c\frac{\partial u}{\partial x} - \frac{c(\Delta x)^2}{6}\frac{\partial^3 u}{\partial x^3} + \frac{c^3(\Delta t)^2}{6}\frac{\partial^3 u}{\partial x^3} + \text{H.O.T}$$

MacCormack's method is second order accurate in time and space!

Error in Lecture (at 9:56 mark): Signs of the second-order terms were incorrectly flipped (Hat tip to Matt Williams for identifying the error)