Lecture 11b: Magnetic field gauge

The induction equation is given by
\[ \frac{\partial B}{\partial t} = -\nabla \times E. \] (1)

The uncurled induction equation is then
\[ \frac{\partial A}{\partial t} = -E - \nabla \phi, \] (2)

where \( \phi \) is the scalar potential. In the Pencil Code, we usually use the Weyl gauge, which means \( \phi = 0 \). See Candelaresi et al. (2011)

References