6. Higher-Order Partial Differential Equations

1. $\dfrac{\partial^2 w}{\partial t^2}+\dfrac{\partial}{\partial x}\left(w\dfrac{\partial w}{\partial x}\right)+\dfrac{\partial^4 w}{\partial x^4}=0.$ *Boussinesq equation.*

2. $\dfrac{\partial w}{\partial y}\dfrac{\partial}{\partial x}(\Delta w)-\dfrac{\partial w}{\partial x}\dfrac{\partial}{\partial y}(\Delta w)=\nu\Delta\Delta w.$

Equation of motion of viscous fluid (it is obtained from the Navier–Stokes equations).

