

Hydrodynamics
Homework 3: Material derivative
1. November 2023

Exercise:

Find the assumptions, under which it is possible to switch the order of material derivative and the partial derivative with respect to time:

$$\frac{D}{Dt} \frac{\partial f}{\partial t} \stackrel{?}{=} \frac{\partial}{\partial t} \frac{Df}{Dt}.$$