

# Review of: "Hamiltonian, Lagrangian, Dynamics and Singularity of the Compressible Fluid Flow"

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**Potential competing interests:** No potential competing interests to declare.

Let me make the following comments.

1. CoM frame is not familiar to me; it looks like the inertia frame of reference.

If so, it is better to declare at first that a flow of constant velocity is considered.

Can you clarify the definition of the CoM frame?

2. The speed of sound is the distance travelled per unit time in the air at rest. So the speed of sound changes for an observer moving with constant velocity towards the source of sound. To the reviewer's opinion, it is better to use the Galilean transform for the sound wave. On the contrary, the speed of light is the same for every observer moving at constant velocity, and the Lorentz transform is necessary. Thus, the formulas of the Doppler effect are different for the sound and the light.

How about considering the Galilean frame instead of the Lorentz frame?