



Mathematical tools for the study of the incompressible Navier- Stokes equations and related models

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Erratum and complements

- The definition of the sound speed in the fluid on top of page 35 should be $\frac{1}{c} = \sqrt{\left(\frac{\partial \rho}{\partial p}\right)_T}$
- Some precisions are needed concerning Theorem VI.1.6 and Lemma VI.1.7 : [Details are given in this document](#)
- In System (VI.38) the inflow part of the boundary $\Gamma_v^{-(t)}$ actually does not depend on t since $v = v_b$ on the boundary and v_b does not depend on time. However, all the analysis proposed here can be adapted to a time-dependent boundary data v_b , provided we assume suitable regularity properties.
- At the end of the statement of Theorem VI.2.1, in the case $\inf \rho_0 > 0$, it is not true that v belongs to the space H since its normal component does not vanish on the boundary. The correct formulation is the following $v - v_b \in L^\infty(]0, T[, H) \cap N_2^{\frac{1}{4}}(]0, T[, H)$.

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