

# Typos of AMS-GSM 192

## Lectures on Navier-Stokes Equations

I thank sincerely those who notified me the typos. Their names are listed in the end of each typo.

1. Page xi line -6:  $\operatorname{div} v$  should be  $\operatorname{div} \sigma$ . (Ruichao Jiang 2026.01)
2. P46 line 2:  $\operatorname{div} v = f$ ;  
line 6: [57, III.3] (the page # refers to first ed. of [57]) (2024.05)
3. P59 (3.28):  $\chi$  missing in the first integral,  $\theta$  missing in the second integral. (2022.01)
4. P60 (3.29): a factor of 2 missing in front of the integral. (2022.01)
5. P63 line -2: (1, 2) should be (2, 3).  
P64 line 8:  $2\delta$  should be  $3\delta$ . (2022.01)
6. P73 lines -1 and -2:  $u + w$  should be  $u - w$ . (2022.01)
7. P75 line -1: the minus sign should be removed. (2022.01)
8. P83 line 1: The cases  $q > 9$  are no longer open, as counterexamples are found in Z. Bradshaw, C.-C. Lai, and T.-P. Tsai, Math. Ann. 388, 3053–3126 (2024). (2024.07)
9. P83 lines 4, 6 and 12: “linear” should be replaced by “sublinear” or “subadditive”. The map  $U$  defined by (5.16) is sublinear, not linear. Marcinkiewicz interpolation theorem is applicable to subadditive maps, see [199, Appendix B]. (C.-C. Lai 2021.03)
10. P83 L8 “ $i = 1, 2$ ” should be replaced by “ $i = 0, 1$ ” (2021.03)
11. P100 L -7: We have  $\operatorname{curl} v$  smooth and hence  $v \in L^\infty C_{\operatorname{loc}}^2$  by a derivative version of Lemma 2.11, see e.g. [155, Proposition A.2]. This is needed to show  $\partial_t v \in L_t^{3/2} L_x^\infty$ . (Yang 2025.01)
12. P105 L11 “ $q > 3$ ” should be replaced by “ $q < 3$ ” (2022.02)
13. P162 L-8:  $f = -v \otimes v$  (Chernobai 2019.07)
14. P186 display after (9.40):  $|v|$  and  $|\nabla v|$  should be switched. (2022.02)
15. P186 L-7 and L-11:  $u$  should be  $w$ . (2022.02)