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References:

- [1] Cattabriga, L., Su un problema al contorno relativo al sistema di equazioni di Stokes. Rendiconti Seminario Mat. Univ. Padova, 31, 1-33 (1961). · [Zbl 0116.18002](#)
- [2] Golovkin, K. K., \& B. A. Solonnikov, On the first boundary value problem for the non-stationary Navier-Stokes equation. Doklady Akad. Nauk USSR 140, 287-290 (1961).
- [3] Fujita, H., On the existence and regularity of the steady-state solutions of the Navier-Stokes equation. J. Fac. Sci., Univ. Tokyo, Sec. I 9, 59-102 (1961). · [Zbl 0111.38502](#)
- [4] Fujita, H., Unique existence of solutions of the Navier-Stokes initial value problem, (an application of fractional powers of operators). Sûgaku (Iwanami) 14, 65-81 (1962). · [Zbl 0122.10102](#)
- [5] Hopf, E., Über die Anfangswertaufgabe für die hydrodynamischen Grundgleichungen. Math. Nachr. 4, 213-231 (1951). · [Zbl 0042.10604](#)
- [6] Ito, S., The existence and the uniqueness of regular solution of non-stationary Navier-Stokes equation. J. Fac. Sci., Univ. Tokyo, Sec. I 9, 103-140 (1961). · [Zbl 0116.17905](#)
- [7] Kato, T., Abstract evolution equation of parabolic type in Banach and Hilbert spaces. Nagoya Math. J. 19, 93-125 (1961). · [Zbl 0114.06102](#)
- [8] Kato, T., Fractional powers of dissipative operators. J. Math. Soc. Japan 13, 246-274 (1961). · [Zbl 0113.10005](#) · [doi:10.2969/jmsj/01330246](#)
- [9] Kato, T., A generalization of the Heinz inequality. Proc. Japan Acad. 37, 305-308 (1961). · [Zbl 0104.09304](#) · [doi:10.3792/pja/1195523678](#)
- [10] Kato, T., \& H. Fujita, On the non-stationary Navier-Stokes system. Rendiconti Seminario Math. Univ. Padova 32, 243-260 (1962). · [Zbl 0114.05002](#)
- [11] Kiselev, A. A., \& O. A. Ladyzhenskaia, On existence and uniqueness of the solution of the non-stationary problem for any incompressible viscous fluid. Izv. Akad. Nauk. USSR, 21, 655-680 (1957).
- [12] Ladyzhenskaia, O. A., Solution ?in the large? of the non-stationary boundary value problem for the Navier-Stokes system with two space variables. Comm. Pure Appl. Math. 12, 427-433 (1959). · [Zbl 0103.19502](#) · [doi:10.1002/cpa.3160120303](#)
- [13] Ladyzhenskaia, O. A., Mathematical Problems for Dynamics of Viscous Incompressible Fluids. Moscow 1961.
- [14] Leray, J., Étude de diverses équations intégrales non linéaires et de quelques problèmes que pose l'hydrodynamique. J. Math. Pures Appl., Ser. IX 12 1-82 (1933). · [Zbl 0006.16702](#)
- [15] Leray, J., Sur le mouvement d'un liquide visqueux emplissant l'espace. Acta Math. 63, 193-248 (1934). · [Zbl 60.0726.05](#) · [doi:10.1007/BF02547354](#)
- [16] Lions, J. L., Sur la régularité et l'unicité des solutions turbulentes des équations de Navier-Stokes. Rendiconti Seminario Mat. Univ. Padova 30, 16-23 (1960). · [Zbl 0098.17205](#)
- [17] Lions, J. L., Sur les espaces d'interpolation; dualité. Math. Scand. 9, 147-177 (1961). · [Zbl 0103.08102](#)
- [18] Lions, J. L., \& G. Prodi, Un théorème d'existence et unicité dans les équations de Navier-Stokes en dimension 2. C.R. Acad. Sci. Paris 248, 3519-3521 (1959). · [Zbl 0091.42105](#)
- [19] Odqvist, F. K. G., Über die Randwertaufgabe der Hydrodynamik zäher Flüssigkeiten. Math. Z. 32, 329-375 (1930). · [Zbl 56.0713.04](#) · [doi:10.1007/BF01194638](#)
- [20] Ohya, T., Interior regularity of weak solutions of the time-dependent Navier Stokes equation. Proc. Japan Acad. 36, 273-277 (1960). · [Zbl 0100.22404](#) · [doi:10.3792/pja/1195524029](#)
- [21] Oseen, C. W., Hydrodynamik. Leipzig 1927.

- [22] Serrin, J., On the interior regularity of weak solutions of the Navier-Stokes equation. Arch. Rational Mech. Anal. 9, 187-195 (1962). · [Zbl 0106.18302](#) · [doi:10.1007/BF00253344](#)
- [23] Sobolevskii, P. E., On non-stationary equations of hydrodynamics for viscous fluid. Doklady Akad. Nauk USSR 128, 45-18 (1959).
- [24] Sobolevskii, P. E., On the smoothness of generalized solutions of the Navier-Stokes equation, ibid Nauk USSR 131, 758-760 (1960).

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