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Global regularity for the initial-boundary value problem of the 2-D Boussinesq system with variable viscosity and thermal diffusivity. (English) [Zbl 1284.35322](#)

J. Differ. Equations 255, No. 6, 1069-1085 (2013).

Summary: We prove the global existence of strong solution to the initial-boundary value problem of the 2-D Boussinesq system and 3-D infinite Prandtl number model with viscosity and thermal conductivity depending on the temperature.

MSC:

35Q30 Navier-Stokes equations

35A01 Existence problems for PDEs: global existence, local existence, non-existence

35Q35 PDEs in connection with fluid mechanics

35B30 Dependence of solutions to PDEs on initial and/or boundary data and/or on parameters of PDEs

Cited in **26** Documents

Keywords:

Boussinesq system; global regularity; initial-boundary value problem

Full Text: [DOI](#)

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