

# Global Well-Posedness to the three-dimensional Boussinesq system with nonlinear damping

Ridha SELMI<sup>1</sup> and Mounia Zaabi<sup>2</sup>

<sup>1</sup>FSG

<sup>2</sup>Universite de Tunis El Manar

May 5, 2020

## Abstract

In this paper, we prove the well-posedness of the solution to the three-dimensional Boussinesq system with nonlinear damping term. Existence, uniqueness and continuous dependence with respect to initial data of the weak solution are proved, under minimum regularity requirement in Sobolev and Lebesgue spaces. Energy method, compactness method, and appropriate technical lemmas are used.

## Hosted file

Ridha\_Mounia\_Sub\_MMAS\_19\_02\_2020.pdf available at <https://authorea.com/users/300165/articles/429856-global-well-posedness-to-the-three-dimensional-boussinesq-system-with-nonlinear-damping>