

# Insensitizing controls for the Boussinesq system with a reduced number of controls

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## Abstract

In this talk, I will present some results concerning the existence of insensitizing controls of the  $L^2$ -norm of the solution of the Boussinesq system with a reduced number of distributed scalar controls. It is well known that this problem can be formulated as a null controllability problem for a cascade system, in which the controls are not present in all the equations. For this system, it is shown that the control on the fluid equation can be chosen to have up to two vanishing components. Furthermore, it is also possible to remove the control on the temperature equation using the particular properties of the cascade system. This is a joint work with Sergio Guerrero and Mamadou Gueye.