1128-35-39 **Fazel Hadadifard*** (`f.hadadi@ku.edu`). *On the global regularity of the 2D critical Boussinesq system with $\alpha > 2/3$.*

We examine the question for global regularity for the Boussinesq equation with critical fractional dissipation (α, β) : $\alpha + \beta = 1$. The main result states that the system admits global regular solutions for all (reasonably) smooth and decaying data, as long as $\alpha > 2/3$. This improves upon some recent works.

The main new idea is the introduction of a new, second generation Hmidi-Keraani-Rousset type, change of variables, which further improves the linear derivative in temperature term in the vorticity equation. This approach is then complemented by new set of commutator estimates (in both negative and positive index Sobolev spaces!), which may be of independent interest. (Received February 02, 2017)