

1145-35-2308

Dhanapati Adhikari* (dadhikari@marywood.edu), 2300 Adams Avenue, Scranton, PA 18509.

On the global well-posedness of the 2D Boussinesq equations with partial dissipation.

The two-dimensional incompressible Boussinesq equations model geophysical fluids and play an important role in the study of Rayleigh–Bénard convection. One of the fundamental issues concerning Boussinesq equations is whether or not its solution remain smooth for all time or they blow up in finite time. In this talk, we consider the 2D Boussinesq equations with partial dissipation and establish the global (in time) regularity of classical solutions with smooth initial data. (Received September 25, 2018)