1018-35-249 **Congming Li*** (cli@colorado.edu), Applied Math, CB 526, Boulder, CO 80309-0526, and **Thomas Y Hou**. *Global Well-Posedness of Partial Differential Equations of Fluid Type.*

I will present the joint work with Tom Hou on the global well-posedness of the viscous incompressible Boussinesq equations in two spatial dimensions and some related equations of fluid type. Using sharp and delicate energy estimates, we prove global existence and strong regularity of this viscous Boussinesq system for general initial data in H^m with $m \geq 3$. Similar results on some related equations of fluid type will also be discussed. (Received March 07, 2006)