SLIM IBRAHIM, Univeristy of Victoria

Global small solutions to the Navier-Stokes-Maxwell equations

We consider a full system of Magneto-Hydro-Dynamic equations. The system formally satisfies an energy estimate. Nevertheless, the existence of global weak solution seems to remain an interesting open problem in both two and three space dimension. In 3D, we show the existence of global small solutions (Kato-type). In 2D, we prove the same result in a space "close" to the energy space.

This is a joint work with S. Keraani (University of Lille 1, France)