

SPEAKER:

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TITLE:

Fluid PDEs with partial or fractional dissipation

ABSTRACT:

Several systems of partial differential equations with partial or fractional dissipation from fluid mechanics, geophysics and astrophysics have attracted considerable attention recently. Significant progress has been made on the issue of whether their solutions exist for all time or become singular in a finite time. This talk presents some of the global regularity results on the surface quasi-geostrophic equation, the Boussinesq equations and the magneto-hydrodynamic equations.