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# Large Eddy Simulation for **Turbulent Flows with Critical** Regularization

#### Hani Ali

(Submitted on 7 Jul 2011)

In this paper, we establish the existence of a unique "regular" weak solution to the Large Eddy Simulation (LES) models of turbulence with critical regularization. We first consider the critical LES for the Navier-Stokes equations and we show that its solution converges to a solution of the Navier-Stokes equations as the averaging radii converge to zero. Then we extend the study to the critical LES for Magnetohydrodynamics equations.

Comments: 18 pages

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