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Dept Stop 9E, Annapolis, MD 21402. *Subgrid Scale Models for Large Eddy Simulation.*

In this talk, I will present global well-posedness results and numerical results for various  $\alpha$  subgrid scale turbulence models. I will also discuss the global well-posedness results for the inviscid simplified Bardina model in three dimensions; a result which is currently not available for the other inviscid  $\alpha$ -models. The inviscid simplified Bardina model is a globally well-posed model which approximates the Euler equation without the addition of viscous or hyperviscous terms. (Received September 26, 2017)