1107-35-415   **Boris Levant**, **Fabio Ramos** and **Edriss S. Titi*** (`titi@math.tamu.edu`), Department of
Mathematics, Texas A&M University, 3368 TAMU, College Station, TX 77843. *On the Statistical Properties of the* 3D *Incompressible Navier-Stokes-Voigt Model.*

The Navier-Stokes-Voigt (NSV) model of viscoelastic incompressible fluid has been recently proposed as a regularization of the 3D Navier-Stokes equations for the purpose of direct numerical simulations. In this talk we present its statistical properties by employing phenomenological heuristic arguments, in combination with Sabra shell model simulations of the analogue of the NSV model. For large values of the regularizing parameter, compared to the Kolmogorov length scale, simulations exhibit multiscaling inertial range, and the dissipation range displaying low intermittency. These facts provide evidence that the NSV regularization may reduce the stiffness of direct numerical simulations of turbulent flows, with a small impact on the energy containing scales. (Received January 19, 2015)