1051-76-63 **Boris Levant**, Department of Computer Science & Applied Math, The Weizmann Institute of Science, 76100 Rehovot, Israel, **Fabio Ramos**, Department of Computer Science & Applied Math, The Weizmann Institute of Science, 76100 Rehovot, Israel, and **Edriss S. Titi*** (etiti@math.uci.edu), Department of Mathematics, The University of California, Irvine, CA 92697-3875. *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 I will present results concerning 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 August 11, 2009)