**Meeting:** 1000, Albuquerque, New Mexico, SS 10A, Special Session on Multiscale Methods and Sampling in Time-Frequency Analysis

1000-35-133 **Natasa Pavlovic*** (natasa@math.princeton.edu), Department of Mathematics, Princeton University, Fine Hall, Washington Road, Princeton, NJ 08544. *Dyadic models for the equations of fluid motion.*

In this talk we shall introduce dyadic models for the Euler and the Navier-Stokes equations and will discuss some results that were obtained for these models. For the dyadic Euler equations we prove finite time blow-up, and in the context of the dyadic Navier-Stokes equations with hyper-dissipation we prove finite time blow-up in case when the degree of dissipation is sufficiently small (joint work with Nets Katz). These results can be generalized to analogous results for a vector dyadic model (joint work with Susan Friedlander). Also time permitting, we shall mention resent analysis of a long time behavior of solutions to the dyadic Navier-Stokes equations in a critical space (joint work with James Colliander, Carlos Kenig and Gigliola Staffilani). (Received August 22, 2004)