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Susan Friedlander* (susan@math.uic.edu), Dept of Mathematics, Statistics and Computer,
University of Illinois-Chicago, Chicago, IL 60637. *A Dyadic Model for the Inviscid Fluid
Equations*. Preliminary report.

Properties of an infinite system of nonlinearly coupled ODE are discussed. This system models some of the properties present in the equations of motion for an inviscid fluid. It is shown that in an appropriate Sobolev norm all solutions blow up in finite time. After blow up, the energy decays due to a process of "anomalous" or turbulent dissipation. This is joint work with Alexey Cheskidov and Natasa Pavlovic. (Received September 07, 2006)