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**Roman Shvydkoy\*** ([shvydkoy@math.uic.edu](mailto:shvydkoy@math.uic.edu)), 851 Morgan St, MC 249, Chicago, IL 60607. *On scaling laws of fully developed turbulence*. Preliminary report.

This talk will focus on a possibility of deriving the classical scaling laws of turbulence for Leray-Hopf weak solutions to the NSE. Although the results of this kind are not new we will present some sharper estimates on the second order structure function, as predicted by the similarity and refined similarity hypotheses, as well as properly defined energy spectrum of the solutions. A distinctive feature of the upper estimates is that they don't require the use of the Navier-Stokes equations and are sharp in the vicinity of the dissipation wavenumber. This is a part of an ongoing joint work with A. Cheskidov. (Received September 14, 2010)