1016-35-109 **Peter Topalov\*** (p.topalov@neu.edu), Northeastern University, 360 Huntington Avenue, Boston, MA 02115. Solutions of mKdV in classes of functions unbounded at infinity.

We prove global (in time) existence and uniqueness theorems for solutions of the modified Korteweg - de Vries equation (mKdV) in classes of smooth functions which are unbounded at infinity. (this is a joint work with T. Kappeler, P. Perry, and M. Shubin) (Received February 06, 2006)