1083-60-35 **Jianfu Chen**, **Jin Ma** and **Hong Yin*** (`hyin@brockport.edu`). *The Wellposedness of Forward-Backward Stochastic Differential Equations with Discontinuous Coefficients.*

In this paper we are interested in the well-posedness of a "regime-switching" type of fully coupled forward-backward SDE (FBSDE) in which the forward drift coefficient is piecewise continuous in the backward component of the solution. Such a discontinuity violates the usual continuity assumptions (on the backward variables) of all existing results, and example shows that non-uniqueness can easily happen when the forward diffusion is degenerate even when the monotonicity conditions are in force. In a Markovian setting with non-degenerate forward diffusion, we show that, by the standard mollification method, a decoupling function can still be constructed, and it is a solution to the corresponding quasilinear PDE in the sense of distribution. With such a decoupling function we first show that the FBSDE admits a weak solution in the sense of Antonelli-Ma (2003) and Ma-Zhang-Zheng (2008). We then prove that the pathwise uniqueness holds, whence the strong well-posedness of the FBSDE in the spirit of Yamada-Watanabe Theorem. Our main tool is a comparison result for SDEs with measurable drift based on the so-called Krylov estimates. This problem is motivated by a practical issue in regime-switching term structure interest rate models. (Received July 28, 2012)