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Changfeng Gui and **Mingfeng Zhao*** (mingfeng.zhao@uconn.edu), Department of Mathematics, 196 Auditorium Road, Unit 3009, Storrs, CT 06269-3009. *Traveling Wave Solutions of Allen-Cahn Equation with Fractional Laplacians.*

In this talk, I will discuss the existence, uniqueness, asymptotic behavior and other qualitative properties of traveling wave solutions to Allen-Cahn equation with fractional Laplacians where the double well potential has unequal depths. The existence is proved by using a continuity argument, where a key ingredient is the estimate of the speed of the traveling wave in terms of the potential in order to get the uniform estimates of the Holder norm. (Received August 24, 2012)