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Changfeng Gui* (changfeng.gui@uconn.edu), Department of Math, U-9, University of Connecticut, Storrs, CT 06269, and **Tingting Huan** and **Mingfeng Zhao**. *Traveling wave solutions to reaction diffusion equations with fractional Laplacians.*

In this talk, I will discuss the existence and asymptotic behavior of traveling wave solutions to Allen-Cahn equation with fractional Laplacians where the double well potential has unequal depths. A key ingredient is the estimate of the speed of the traveling wave in terms of the potential, which seems new even for the classical Allen-Cahn equation. I will also discuss nonexistence of traveling wave solutions to a nonlocal combustion model. The talk is based on recent results obtained jointly with Tingting Huan and with Mingfeng Zhao respectively. (Received February 09, 2014)