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Patrick Guidotti and **Yuanzhen Shao*** (shao92@purdue.edu), 150 N. University Street, West Lafayette, IN 47907. *Wellposedness of a Nonlocal Nonlinear Diffusion Equation of Image Processing.*

In this talk, we will establish the wellposedness of a degenerate regularization of the well-known Perona-Malik equation in noise reduction for discontinuous initial data. We will also show the (exponential) asymptotic stability of stationary solutions. (Received January 23, 2017)