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Yongki Lee* (yongkilee@georgiasouthern.edu), Department of Mathematical Sciences, Georgia Southern University, Statesboro, GA 30460. *Wave breaking in a class of non-local conservation laws.*

In this talk, we discuss threshold conditions for wave breaking in a class of non-local conservation law with concavity changing flux. From a class of non-local conservation laws, the Riccati-type ODE system that governs a solution's gradient is obtained. The changes in concavity of the flux correspond to the sign changes in the leading coefficient functions of the ODE system. We identify the blow-up condition of this structurally generalized Riccati-type ODE. The method is illustrated via the Whitham-type equation with nonlinear drift and the traffic flow models with nonlocal-concave-convex flux. (Received January 17, 2019)