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Mathew Johnson* (mat.john@ku.edu). *Stability of Viscous Roll Waves.*

Roll-waves are a well observed hydrodynamic instability occurring in inclined thin film flow, mathematically described as periodic traveling wave solutions of the St. Venant system. In this talk, I will discuss recent progress concerning the stability of viscous roll-waves in a variety of asymptotic regimes, including near the onset of hydrodynamic instability and in the inviscid limit.

This is joint work with Blake Barker (Brown), Pascal Noble (University of Toulouse), L. Miguel Rodrigues (University of Lyon), and Kevin Zumbrun (Indiana University). (Received January 19, 2015)