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Michael Renardy* (mrenardy@math.vt.edu) and **Xiaojun Wang**. *Well-posedness of boundary layers in viscoelastic flows.*

The Prandtl equation can formally be derived to describe the boundary layer in a high Reynolds number flow. However, establishing the mathematical well-posedness of this equation has been found to be far from easy. In this lecture, I shall present recent result on the well-posedness of boundary layer equations for viscoelastic flows. These equations are in many respects better behaved than their Newtonian counterparts. (Received September 25, 2012)