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**Valeria Barra\*** (vb82@njit.edu), **Shahriar Afkhami** (shahriar@njit.edu) and **Shawn A. Chester** (shawn.a.chester@njit.edu). *Numerical Simulations of Thin Viscoelastic Sheets.*

We present numerical simulations of free-surface flows of thin sheets of nearly incompressible viscoelastic media in three dimensions. To include the viscoelastic stresses we consider linear differential viscoelastic constitutive models. The numerical framework used is an extension of a finite element method for linearly elastic thin shells, in which each triangular element exhibits constant strain and stress. This formulation applied to large deformation theory allows to obtain simulations of different physical phenomena involving thin sheets of viscous and viscoelastic media, such as shearing, stretching, and sagging. (Received September 27, 2017)