Euler-alpha and vortex blob regularization of vortex sheet motion MONIKA NITSCHE, University of New Mexico, DARRYL HOLM, Imperial College, VAKHTANG PUTKARADZE, Colorado State University — The Euler-alpha and the vortex blob model are two different regularizations of incompressible ideal fluid flow. We apply both models to compute the motion of vortex sheets and compare the results. By certain measures, the Euler-alpha model is closer to the unregularized flow than the vortex blob model. The differences that result in vortex sheet linear stability properties and core dynamics of the spiral vortex sheet roll-up are discussed.

Monika Nitsche
University of New Mexico