

1071-65-178

Sum Chow* (schow@math.byu.edu), Dept of Mathematics, Brigham Young University, Provo, UT 84602, and **Warren Crutcher** (warrencrutcher@gmail.com), Provo, 84602. *Finite element approximations of glacier flows with sliding*. Preliminary report.

The steady flow of glaciers is typically represented by a nonlinear partial differential equation with gradient nonlinearity. Sliding is an important mechanism in glacier flows but are difficult to model. In the study we examined extension of the model proposed by Calvo et al and investigated an alternative formulation using Bingham like model. We will discuss the use of finite element method to solve the problems. (Received March 04, 2011)