1067-35-883   **Nicholas M Ercolani*** (`ercolani@math.arizona.edu`), Department of Mathematics, The University of Arizona, 617 N. Santa Rita Ave. P.O. Box 210089, Tucson, AZ 85721-0089. *A Burgers model for striped pattern formation in the strong bending regime.*

We will present a model for the formation of defects in patterns that arise in 2D, spatially extended physical systems whose principal bifurcation is from spatial homogeneity to semi-discrete ("striped") patterns. Our model stems from a variational extension of the Cross-Newell phase diffusion equation and incorporates persepctives from experiment (Rayleigh-Benard convection), simulation and analysis. The analysis takes advantage of a Cole-Hopf linearization for the variational equations and invites comparison to the known validity of the Burgers phase equation in 1D. (Received September 15, 2010)