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**Ko-Shin Chen\*** ([koshchen@indiana.edu](mailto:koshchen@indiana.edu)), Dept. of Math, Indiana U., 831 E. Third St.,  
Bloomington, IN 47405. *Ginzburg-Landau Vortices on Manifolds.*

We investigate Ginzburg-Landau energy posed on 2-manifold. We will show that a critical point is unstable if it has a vortex at a location where Gauss curvature is positive. Furthermore, for a surface of revolution, any critical point having vortices is unstable regardless of Gauss curvature at vortex locations. Next, we will discuss the Ginzburg-Landau heat flow on a surface of revolution with boundary. By an extra geometric assumption, we will show that all vortices of the solution disappear after a finite time. (Received August 10, 2013)