1172-35-354   **Andres A Contreras***, 1290 frenger mall, MSC 3MB / Science Hall 236, las cruces, NM 88003-8001, and **Robert L Jerrard**. *Vortex clustering phenomena due to geometric effects in 3d superconductivity.*

We obtain an improved compactness for the vorticity of configurations in 3d GinzburgLandau in situations where clustering is expected. This clustering is imposed by the geometry in certain nonconvex domains. In this context, we give a characterization of the vorticity of maps with a bounded "renormalized energy"-an energy we derive as part of our analysis- of interacting filaments that takes into account boundary effects. We show in particular that the vorticity region corresponds to a union of Lipschitz curves. This is joint work with Robert L. Jerrard. (Received September 01, 2021)