1137-35-345 **Gregory Drugan***, 6300 SW Nicol Road, Portland, OR 97223. *An embedded $S^1 \times S^{n-1}$ self-shrinker in $\mathbb{R}^{n+1}$ via variational methods.*

In this talk, we give an alternative proof for the existence of an embedded $S^1 \times S^{n-1}$ self-shrinker in $\mathbb{R}^{n+1}$. The proof uses a modified curve shortening flow to find a closed geodesic for the conformal metric $r^{2(n-1)}e^{-(x^2+r^2)/2}(dx^2 + dr^2)$ on the half-plane $\{(x, r) \in \mathbb{R}^2 \,|\, r > 0\}$. A consequence of the proof is an upper bound for the weighted energy of the self-shrinker. This is a joint work with Xuan Hien Nguyen. (Received February 06, 2018)