1127-35-254   **William M Feldman*** (`feldman@math.uchicago.edu`). *Liquid Drops on a Rough Surface.*
I will discuss the problem of determining the minimal energy shape of a liquid droplet resting on a rough solid surface. The shape of a liquid drop on a solid is strongly affected by the micro-structure of the surface on which it rests, where the surface inhomogeneity arises through varying chemical composition and surface roughness. I will explain a macroscopic regularity theory for the free boundary which allows to study homogenization, and more delicate properties like the size of the boundary layer induced by the surface roughness.

The talk is based on joint work with Inwon Kim. (Received February 05, 2017)