1135-52-321 **Kristin DeSplinter**, **Satyan L. Devadoss*** (devadoss@sandiego.edu), **Jordan Readyhough** and **Bryce Wimberly**. *Unfoldings of cubes never overlap.* Preliminary report.

The open problem of constructing a *net* (a connected edge-unfolding without overlap) for every convex polyhedron can be traced back 500 years to Albrecht Durer. We explore nets for higher dimensional polytopes, with an emphasis on cubes. A visual algorithm is developed which outputs geometric unfoldings given a spanning tree. This machinery is used to show that *any* unfolding of an n-cube is without overlap. We close with a look at unfoldings into chains, with an elegant relationship to integer partitions. (Received August 23, 2017)