

1145-52-620

**Kristin DeSplinter, Satyan Devadoss\*** (devadoss@sandiego.edu), **Jordan Readyhough**  
and **Bryce Wimberly**. *Cube unfoldings never overlap*.

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 Dürer. We explore nets for cubes by developing a visual algorithm. This is used to show that any unfolding of an  $n$ -cube is without overlap, with elegant relationships to integer partitions and chord diagrams. (Received September 11, 2018)