1120-05-316 **Thomas A McConville*** (thomasmcconvillea@gmail.com), 182 Memorial Drive, Cambridge, MA 02139, and **Al Garver**. *Flip graphs of polygonal subdivisions and noncrossing tree partitions.*

Given a tree embedded in a disk, we introduce two partial orders - the oriented flip graph of polygonal subdivisions and the lattice of noncrossing tree partitions. These posets generalize the Tamari order and the lattice of noncrossing set partitions, respectively. Our first main result is that the poset of polygonal subdivisions is a lattice. To prove this, we identify this poset as a lattice quotient of a lattice of biclosed sets. The lattice of polygonal subdivisions has the additional structure of a congruence-uniform lattice. Consequently, it admits an alternate poset structure known as the shard intersection order. Our second main result is an isomorphism between the shard intersection order with the lattice of noncrossing tree partitions. This is joint work with Al Garver. (Received February 23, 2016)