The *curve graph C(S)* of a closed orientable surface *S* is the graph whose vertices correspond to closed curves in *S* satisfying certain simple conditions. Edges join vertices that have disjoint representatives on *S.* Each edge is defined to have length 1. The distance *d(v,w)* is defined to be the number of edges in a shortest path in the curve graph from v to w. Any such path is called a *geodesic*. The intersection number of *v* and *w*, denoted *i(v,w),* is simply the number of intersections of the two curves as they travel along the surface.

We highlight a new relationship between the distance *d(v,w)* of a filling pair of curves *v* and *w* in *C(S)* and the surface decomposition of *S* into polygons that is induced by cutting *S* open along *v* and *w*. The main result is the discovery and analysis of particular configurations of rectangles in the decomposition, called *spirals*. We show that adding spirals, an operation which always increases intersection number, can increase distance or can send intersection number to infinity, leaving distance unchanged. This talk is based on *Distance and intersection number in the curve graph of a surface*, joint with Joan Birman (Columbia University) and Matt Morse (New York University).