On Friday at 1pm in CH 7, Michael Dorff will be presenting

Shortest paths, soap films, and mathematics

In high school geometry, we learn that the shortest path between two points is a line. In this talk we will explore this idea in several different settings.

First, we will apply this idea to finding the shortest path connecting four points. Then, we will move this idea up a dimension and look at a few equivalent ideas in terms of surfaces in 3-dimensional space. Surprisingly, these first two settings are connected through soap films that result when a wire frame is dipped into a soap solution. We will use a hands-on approach to look at the geometry of some specific soap films or "minimal surfaces".