1154-51-1940 **Maxwell Auerbach**, **Adam Hodapp** and **Rebecca Whitman*** (rwhitman@wellesley.edu).
*Shortest Paths in Generalizations of the Sierpinski Carpet.* Preliminary report.

In this talk we address several questions about shortest paths between two points in a 3-parameter family of fractals that naturally generalize the Sierpinski carpet. In particular, we find shortest geodesic paths between opposite corners of fractals in a 2-parameter subfamily and use this to prove results about the diameter of these fractals. We provide bounds on the shortest path length between opposite corners in some other cases by using computational methods and linear programming. We also describe special circumstances when shortest geodesic paths must be monotonic with respect to each coordinate. (Received September 16, 2019)