Steven Schlicker* (schlicks@gvsu.edu), Department of Mathematics, 2307 Mackinac Hall, Grand Valley State University, Allendale, MI 49401-9403. The Geometry of the Hausdorff Metric.

In addition to its applications in fractal geometry, the Hausdorff metric imposes an interesting and often counterintuitive metric geometry on the hyperspace of compact subsets of n-dimensional real space. Understanding this geometry helps us to understand the metric itself. We will describe connections in this geometry to Fibonacci-type sequences, explain how lines can have endpoints, why there can be infinitely many different possibilities for the number of points at a specified location between two fixed points, and discuss a fascinating and unexpected property of the numbers 19, 37, and 41. (Received September 01, 2006)