1023-E5-269 **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)