

1125-VW-1195 **David Richeson*** (richesod@dickinson.edu), Department of Mathematics and Comp Science,
Dickinson College, Carlisle, PA 17103. *Sugihara's Impossible Cylinder Illusion*.

Last spring Kokichi Sugihara created a YouTube video called *Ambiguous Optical Illusion* that shows a variety of three-dimensional objects that look like one shape when viewed from the front but like a different shape in a mirror propped up behind it. The video went viral and was viewed 5 million times in the first week. In this talk we show the mathematics behind this illusion—a straightforward application of vectors, lines, and parametric curves in three-dimensional space. We also created a paper template that you can use to make your own impossible cylinder and wow your friends. (Received September 15, 2016)