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**Marianna Csornyei\*** (csornyei@math.uchicago.edu) and **Alan Chang**. *The Kakeya needle problem for rectifiable sets.*

We show that the classical results about rotating a line segment in arbitrarily small area, and the existence of a Besicovitch and a Nikodym set hold if we replace the line segment by an arbitrary rectifiable set. This is a joint work with Alan Chang. (Received January 29, 2019)