

1145-05-2739      **Adam Buck\*** (adambuck@uwm.edu). *The Probability Four Lines in  $\mathbb{F}_q\mathbb{P}^3$  Meet Two Lines.*

Given four "random" lines in  $\mathbb{RP}^3$ , the probability that exactly two lines intersect all four is 1. Replacing the field of real numbers by the field with  $q$  elements, this probability is a rational function in  $q$  which approaches 1 as  $q$  approaches infinity. I will discuss this probability and related notions, such as the expected number of lines that intersect four random lines. Higher dimensional analogues of this problem will also be discussed. (Received September 25, 2018)