

1135-62-2746

Benjamin S Lieberman* (b1250604@muhlenberg.edu), 7711 Mary Cassatt Dr, Potomac, MD 20854, and **James Russell**. *A Monte Carlo measurement of Gerrymandering in Pennsylvania through random tessellation.*

We examine the prevalence of gerrymandering in Pennsylvania through Monte Carlo simulation. To generate the simulations, the area of Pennsylvania is divided using Centroidal Voronoi tessellation with centroids sampled from inhomogeneous Poisson point processes. To ensure that each of the districts constitutes an approximately equal share of the population, a large number of tiles are generated and assigned to a particular district using an acceptance-rejection sampling algorithm. The vote of each individual is simulated using voter registration information and the results from the simulated election are compared to the actual distribution of congressional seats. (Received September 26, 2017)