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In recent years, ensemble analysis has emerged as a powerful tool for identifying districting plans that appear to be extreme outliers with regard to partisan outcome of elections, as well as to other election-related metrics. An issue of fundamental mathematical importance is how to choose a sampling method for constructing an ensemble of plans, and how to describe the associated probability distribution on the space of districting plans.

In this talk, we consider the ReCom sampling method developed by the Metric Geometry and Gerrymandering Group. It has been observed that this method tends to favor plans with relatively compact districts. We will describe why this sort of qualitative behavior might be expected, and we will present preliminary experimental evidence of a quantitative relationship between the ReCom sampling distribution and district compactness as measured by the number of cut edges in each plan.

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