

Vassar College Mathematics & Statistics

COLLOQUIUM



Math to Data Science: The Study of Voting

Dr. Matt Jones
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Tuesday, March 24
4pm Rocky 310
Tea at 3:30 in Rocky 305

Abstract: Where is the best food on campus? Everyone has their own opinions, but incorporating all those opinions into a single definitive ranking takes some work. In situations like this, democratic elections are usually how we compile the preferences of an entire electorate into a single societal preference. The most common election method is Plurality, but there are many different ways to cast ballots and decide on a winner. We can think of these election methods as mathematical functions and then study their properties, just like we might ask if a function on the real numbers is continuous. There are numerous theorems we can prove about these election methods, but unfortunately, these theorems will only take us so far. To fill in the gaps, we will turn to real-world election data to see how often various election methods encourage strategic voting and other kinds of strange behavior.

Interactive Data Gathering:

In order to have some real data from Vassar students to analyze during the talk, Dr. Jones would appreciate it if you would fill out the following survey about food options on campus before the talk, either by clicking the link or scanning the QR code:

<https://forms.gle/84n6zK7bJux9PtPY9>

