



College of Science and Mathematics

Department of Mathematics

Infinite Horizons Lecture Series 2016 – 2017

Monday, November 7, 2016

SPEAKER: Dr. Victoria Powers, Emory University

TITLE: *“Proportional (Mis)representation: The mathematics of apportionment”*

ABSTRACT: Following the 2010 census, Georgia gained a seat in the U.S. House of Representatives while several states lost a seat. Did you ever wonder how the 435 seats in the U.S. House are divided among the states? This is a problem of apportionment, i.e., turning a set of fractions into integers so that the sum of the integers equals the sum of the fractions.

In this talk we discuss the mathematics of apportionment and we will discover subtleties and paradoxes that aren't apparent at first glance. We will also look at the history of apportionment in the U.S. House, where we will encounter the first U.S. presidential veto, the Alabama paradox, and other fascinating stories.

Thursday, April 13, 2017

SPEAKER: Dr. Moon Duchin, Tufts University

TITLE: *“Gerrymandering, geometry, and the shape of fairness”*

ABSTRACT: By controlling the shapes of voting districts, you can often predetermine the outcomes of elections. I'll try to convince you that geometry — from high-school geometry to new ideas at the research frontier — can help detect vote-rigging and promote democracy.