## SVCOMATHIEMLATIIIC

## Lillian Pierce <br> Duke University and Institute for Advanced Study

# "Marching Bands, Prime Numbers, and 

 Sieves: Sometimes Imprecision Wins"Monday, April 9, 2018<br>Talk at 4:00 - Park 338<br>Tea at 3:30-Park 339, Math/Physics Lounge

## Abstract:

Imagine you have been selected to adjudicate a marching band contest. On the first day, you decide to listen only to the clarinet section of each band: if they play out of tune, you throw the band out; if they play in tune, you give the band a medal. On the second day, you decide this isn't a good method. Instead, you decide that if at least half the band plays out of tune, you throw the band out; otherwise, you give the band a medal. On the third day, it's suggested that you find an alternative career.

Luckily, it turns out that a very old math problem will benefit from your strategies. Prime numbers will be our clarinets, and we'll see class numbers, number fields, and sieves as well.

