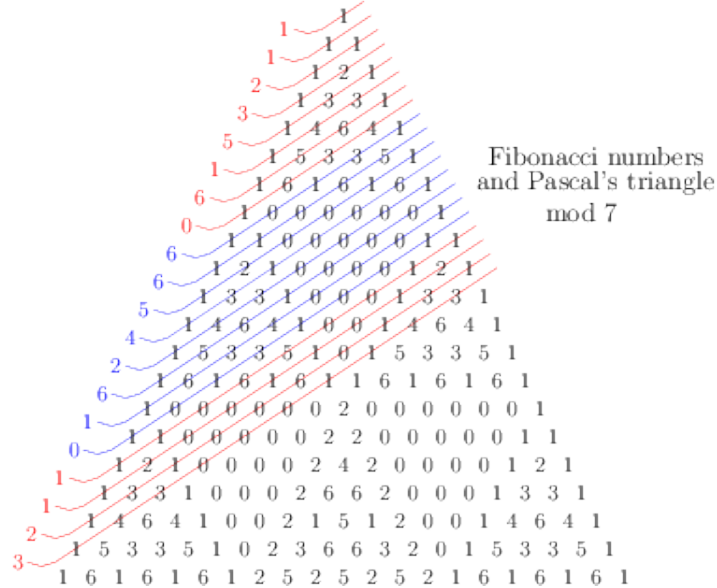


# The SUMO Speaker Series for Undergraduates

Thursday, April 10  
4:15-5:05, Room 380C

(Food Provided)

## FIBONACCI NUMBERS mod $p$ Brian Lawrence



### Abstract

The Fibonacci numbers are ubiquitous in nature and a basic object of study in number theory. A fundamental question about the Fibonacci numbers is: which of them are multiples of a given prime  $p$ ? In particular, we will see that either the  $p$ -th Fibonacci number, the one before it, or the one after it, is a multiple of  $p$ . Along the way we will explore the arithmetic of finite fields, an essential tool in number theory, and perhaps even some analogies with differential equations and linear algebra.

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