# Department of Mathematics and Statistics Colloquium 

## Pascal, Fibonacci, Polynomials and Differential Equations

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#### Abstract

Pascal developed a triangle made up of natural numbers that contains the Fibonacci sequence in it. This is well known. However, what is not well known is that there are polynomials and their products in the Pascal triangle that solve some well-known differential equations. Through these differential equations one can develop more general Pascal type triangles that contain Fibonacci sequences in a straight forward manner. This talk will be accessible to anyone who has passed the first two semesters of a standard calculus sequence.


