

Western Illinois University

# Math Club

Wednesday April 6

Morgan 202

5:30 pm

## The Binomial Theorem

By Lia Petracovici

The Binomial Theorem has been around for a long time and is useful in different areas of mathematics. After stating the Binomial Theorem and the combinatorial idea it captures, the talk will focus on its applications. Among the ones that will be presented are examples of approximation, some identities on binomial coefficients, the convergence of the sequence of Euler's constant  $e$ , the mean/variance of the binomial distribution, multi-angle trigonometric identities. I will end with the generalization of the Binomial Theorem to real exponents.

Join Math Club for this talk, and enjoy pizza and drinks as well. If you have any questions, email Malone Wall at [ma-wall@wiu.edu](mailto:ma-wall@wiu.edu)