



Department of Mathematics



[MathClub@WMU](mailto:MathClub@WMU)

Michigan Epsilon Chapter of Pi Mu Epsilon

## Busy Beavers, Goldbach's Conjecture, and the Axioms of ZFC

Patrick Bennett

Alan Turing defined the Turing machine in order to model a computer. This imaginary machine manipulates data according to very simple rules, and yet it is capable of doing every task our computers can do. In this talk we will start with Busy Beavers, an easy to understand game played with Turing machines. However this "easy" game will take us on a journey that touches on the very foundations of all math, truly humongous numbers, different sizes of infinity, math problems that have remained unsolved for centuries, and problems that will **never** be solved.

4 p.m. Friday January 25  
6625 Everett Tower, WMU Main Campus

All are welcome!

<http://www.wmich.edu/mathclub/>

Questions? Contact Patrick Bennett ([patrick.bennett@wmich.edu](mailto:patrick.bennett@wmich.edu))