The SUMO Speaker Series for Undergraduates

(food from Pizza Chicago)
Wednesday, February 24
4:40-5:30, room 380C

Every integer > 1 is a sum of at most a million primes
Maksym Radziwill

Abstract: The famous Goldbach conjecture states that every even positive integer is a sum of two primes, and as a consequence every integer > 1 is a sum of at most three primes. Faced with the lack of any definite result, back in the 30's it was a challenge to even prove the existence of a constant $C > 0$ such that any integer > 1 is a sum of at most $C$ primes. The challenge was taken up by a young Russian mathematician, Schnirelman, who succeeded in establishing the existence of $C > 0$. In this talk I will describe Schnirelman's proof, and obtain an explicit estimate for $C > 0$.

There are almost no prerequisites. In the words of the famous analytic number theorist Landau: "[this proof] contains some of the most significant achievements in the number theory that I was privileged to witness in my lifetime [...] It could have appeared one hundred years ago and can be understood by a reader without the knowledge of the differential and integral calculus, not to mention the theory of complex variables".

sumo.stanford.edu/speakers