

Math 5P99 Masters Project Presentation

Wednesday February 8th at 3:00pm

When does the sum of 4 Fibonacci numbers equal a power?

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Abstract

The aim of this work is the study of Diophantine equations using linear forms in logarithms and algebraic techniques. I was particularly interested in solving the Diophantine equation of when a sum of 4 Fibonacci numbers equal a power of an integer. I will begin my talk by establishing some preliminary results. I will show how using linear forms in logarithms and techniques from algebraic number theory to solve $F_{n_1} + F_{n_2} + F_{n_3} + F_{n_4} = 6^a$.

Keywords: *Diophantine Equation, Mattveev Theorem, Legendre Theorem.*

Examination Committee Members:

Supervisor: Dr. Omar Kihel

Supervisory Committee Members: Dr. Chantal Buteau

Presentation will be held in Thistle Complex, Room TH149