

# Lethbridge Number Theory and Combinatorics Seminar

Monday — September 23, 2019

Room: C630

Time: 12:00 to 12:50 p.m.

# Selcuk Aygin

## Extensions of Ramanujan-Mordell Formula with Coefficients 1 and $p$

We use properties of modular forms to extend the Ramanujan-Mordell formula. Our result yields formulas for representation numbers by the quadratic form  $\sum_{i=1}^{2a} x_i^2 + \sum_{i=1}^{2b} p y_i^2$ , for all non-negative integers  $a, b$  and for all odd prime  $p$ . We obtain this result by computing the Fourier series expansions of modular forms at all cusps of  $\Gamma_0(4p)$ .

**EVERYONE IS WELCOME!**

Visit the seminar web page at  
<http://www.cs.uleth.ca/~nathanng/ntcoseminar/>



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