

Lethbridge Number Theory and Combinatorics Seminar

Monday — October 7, 2013

Room: B660

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

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Symmetries of an Elliptic Net

Abstract: In 1948, Morgan Ward introduced the concept of an Elliptic Divisibility Sequence (EDS) as an integer sequence (W_n) which satisfies the recurrence relation

$$W_{m+n}W_{m-n}W_1^2 = W_{m+1}W_{m-1}W_n^2 - W_{n+1}W_{n-1}W_m^2,$$

and satisfies the additional property that $W_m|W_n$ whenever $m|n$. Of particular interest to Ward, were what he called symmetries of an EDS. Ward showed that if (W_n) is an EDS with $W_r = 0$, then we have

$$W_{r+i} = ab^i W_i,$$

for some a and b . In her Ph.D. thesis in 2008, Kate Stange generalized the concept of an EDS to an n -dimensional array called an Elliptic Net.

We will discuss the connections between EDS's, Elliptic Nets, and elliptic curves, and give a generalization of Ward's symmetry theorem for elliptic nets.

EVERYONE IS WELCOME!

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



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