

Lethbridge Number Theory and Combinatorics Seminar

Monday — October 26, 2015

Room: **C630**

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

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Gaps between zeros of the Riemann zeta function

Abstract: The Riemann Hypothesis predicts that all zeros of the Riemann zeta function are located on the line $\Re(s) = \frac{1}{2}$. Also, we have that the number of zeros with imaginary parts located between T and $2T$ is approximately $(2\pi)^{-1}T \log T$. Therefore the average gap is about $\frac{2\pi}{\log T}$. It has been conjectured that there are gaps that are smaller than $\frac{2\pi c}{\log T}$, for every $c > 0$. This has been proven for c slightly larger than $\frac{1}{2}$.

Proving that c can be taken less than $\frac{1}{2}$ seems to be a very hard problem, despite being far from the conjecture. In this talk we discuss the connection between Chowla's conjecture on the shifted convolution sums of the Liouville's function and the size of c .

EVERYONE IS WELCOME!

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

