

BI-CO MATHEMATICS COLLOQUIUM

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*“Primes and Zeta functions in
combinatorics and number theory”*

Monday, February 7, 2022

Talk at 4:00 – KINSC Hilles 109

Zoom Link:

<https://haverford.zoom.us/j/96986893143?pwd=Z2VWaDZ2RXRuTFJGeWM1U3RCc1dDdz09>

Meeting ID: 969 8689 3143

Passcode: 701959

Abstract:

Prime numbers are a central topic in number theory. They have inspired the study of many subjects in mathematics.

For a finite graph or simplicial complex, closed geodesics play the role of primes. In this survey talk we shall explore the distribution of these primes through the associated zeta functions. The results are products of rich interplay between number theory and combinatorics.

When the associated zeta function satisfies the Riemann Hypothesis, the underlying combinatorial object has nice properties. As such, it has interesting applications, which will also be discussed.

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