Philadelphia Area Number Theory Seminar

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Jensen-Pólya Criterion for the Riemann Hypothesis and Related Problems

Abstract: In this talk, I will summarize forthcoming work with Griffin, Ono, and Zagier. In 1927, Pólya proved that the Riemann Hypothesis is equivalent to the hyperbolicity of Jensen polynomials for Riemann's Xi-function. This hyperbolicity has been proved for degrees $d \leq 3$. We obtain an arbitrary precision asymptotic formula for the derivatives $\Xi^{(2n)}(0)$, which allows us to prove the hyperbolicity of 100% of the Jensen polynomials of each degree. We obtain a general theorem which models such polynomials by Hermite polynomials. This general condition also confirms a conjecture of Chen, Jia, and Wang.

FRIDAY, November 3, 2017
(note the special day)
2:40 – 4:00 PM

Bryn Mawr College
Department of Mathematics
Park Science Center **328**

Tea and refreshments at 2:20PM in Park 339