Texas Tech University. Pure Mathematics Colloquium.
Current Advances in Mathematics.

A positivity conjecture related to the Riemann zeta function

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ABSTRACT. The celebrated Riemann hypothesis can be reformulated as a simply-stated criterion concerning least-squares approximation. While carrying out computations related to this criterion, we have observed a curious phenomenon: for no apparent reason, at least the first billion entries of a certain infinite triangular matrix associated to the Riemann zeta function are all positive. In this talk, I shall explain the background leading to this observation, and make a conjecture. (Joint work with Hugues Bellemare et Yves Langlois.)